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NAVAL POSTGRADUATE SCHOOL MONTEREY, CALIFORNIA



THESIS

**AN ANALYSIS OF FOREIGN MILITARY
SALE/LEASE OF U.S. NAVY SHIPS TO ALLIED
COUNTRIES BY USING "HOT SHIP"
TRANSFER METHODS: "TURKISH KNOX
CLASS FRIGATE TRANSFER EXAMPLE"**

by

Cenk Unal

September 1995

Principal Advisor:

Thomas H. Hoivik

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This thesis examines the nature and provisions of the U.S. FMS/FML ship transfer process under the realm of the Security Assistance program. This topic is particularly timely, since the United States is currently downsizing the Navy, while trying to maintain its world influence and strategic alliances. An effective FMS/FML ship transfer process is paramount to the success of U.S. strategic goals. However, problematic issues concerning effective implementation of the FMS/FML ship transfer processes have been noted in the past. Therefore, extensive research and detailed analysis of the FMS/FML ship transfer process, with respect to the sale/lease of nine former U.S. Knox Class Frigates to Turkey, was conducted to identify problematic issues and develop lessons learned and recommendations for issue resolution.

Adopting the recommendations in this thesis should significantly improve the implementation of future FMS/FML ship transfer programs and effectiveness of U.S. arms transfers. Additionally, this thesis will contribute to the knowledge needed by Foreign officers who will work in conjunction with the U.S. officials engaged in the transfers of U.S. Navy ships in the future.

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"HOT SHIP" TRANSFER METHODS: "TURKISH KNOX CLASS
FRIGATE TRANSFER EXAMPLE"**

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of the requirements for the degree of

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TABLE OF CONTENTS

I.	INTRODUCTION	1
	A. BACKGROUND	1
	B. THESIS OBJECTIVE	2
	C. RESEARCH QUESTIONS	3
	1. Primary	3
	2. Subsidiary	3
	D. SCOPE AND LIMITATION OF RESEARCH	4
	E. METHODOLOGY	4
	F. ORGANIZATION OF STUDY	5
II.	SECURITY ASSISTANCE AND THE U.S. SYSTEM FOR ARMS SALES APPROVAL	7
	A. HISTORY	7
	1. The Place of the U.S. in World Arms Sales	7
	2. U.S. - Turkey Arms Sales	9
	B. SECURITY ASSISTANCE	11
	C. U.S. SECURITY ASSISTANCE PROGRAM COMPONENTS	12
	1. FMS/FML and Foreign Military Construc- tion Sales Program	13
	2. The Foreign Military Financing Program (FMFP or FMF)	14

3.	Direct Commercial Sales (DCS) Licensed Under the Arms Export Control Act (AECA)	15
4.	The International Military Education and Training Program (IMET)	15
5.	The Economic Support Fund (ESF)	16
6.	Peacekeeping Operations (PKO)	16
7.	The Nonproliferation and Disarmament Fund	17
D.	U.S. GOVERNMENT ORGANIZATIONS FOR SECURITY ASSISTANCE	17
1.	Executive Branch: The President	17
2.	Legislative Branch: The Congress	18
3.	Judicial Branch: The Courts	21
E.	CONGRESSIONAL AUTHORIZATIONS AND APPROPRIATIONS	21
1.	Authorization Acts	22
2.	Appropriation Acts	24
3.	Conditions of Eligibility	25
F.	NOTIFYING CONGRESS	25
1.	Foreign Military Sales/Leases	25
2.	Congressional Joint Resolutions	27
G.	SUMMARY	28
III.	FMS/FML TRANSFER PROCESS OF U.S. NAVAL SHIPS TO FOREIGN GOVERNMENT	31

A.	SCOPE	31
B.	THE U.S. NAVY SHIP TRANSFER PROGRAM	31
1.	Background	31
2.	U.S. Navy Ship Transfer Policies	33
3.	Responsibilities	35
4.	Ship Transfer Methods	40
C.	THE SHIP TRANSFER PROCESS	48
1.	The Planning Phase	51
2.	The Ship Offer Phase	51
3.	Ship Inspections and Formal Briefings Phase	55
4.	Congressional Approval and Sale/Lease Development Phase	56
5.	Transfer and Subsequent Support Phase	61
D.	FOLLOW-ON SUPPORT	64
IV.	CASE ANALYSIS: TURKISH KNOX CLASS FRIGATE TRANS- FER PROGRAM	65
A.	TURKISH NAVY MODERNIZATION PROGRAM	65
B.	KNOX CLASS SHIP TRANSFER PROGRAM	66
1.	Background	66
2.	History of the Transfer	67
C.	ANALYSIS OF TRANSFER PROBLEMS	70
1.	Training	70

2.	Technical	74
3.	Logistics	75
4.	Management and Accounting of FMS Funds . .	77
5.	Long-Term Technical/Logistics Support- ability	78
D.	LESSONS LEARNED	79
1.	FML Benefitted Both Turkey and the U.S. .	79
2.	"Hot Ship" is the Most Beneficial Trans- fer Method	80
3.	The Scheduling of Schools Must Be Improved	80
4.	Exogenous Factors Can Influence the Implementation of the Training Program . .	81
5.	Future Training Support is Affected by Downsizing	81
6.	Ambiguous Policies are Limiting the Depth and Breath of Training	81
7.	Doctrinal Differences Can Effect the Conduct of Training	81
8.	Communication Barriers Limits Learning from Training	82
9.	Current U.S. Policies Do Not Reflect the Effects of Downsizing	82
10.	Technical Briefings Should Include Communication Issues	82
11.	Unilateral Changes to the Transfer Timeline Negatively Affects Logistics Planning	83

12.	Level of COSAL Equipment May Vary from Ship to Ship	83
13.	Class and Quality of Ammunition Transferred Should be Stated in the Lease Agreement	83
14.	Tracking of Funds is a Major Hurdle for the Recipient Country	83
15.	Follow-on Technical/Logisticw Support Is Waning	84
16.	On-the-Job Training Period Is Too Short	84
17.	During Ship Transfer Process Maintain Continuity	84
E.	SUMMARY	85
V.	CONCLUSION	89
A.	GENERAL	89
B.	SPECIFIC ISSUES	90
C.	ANSWERS TO RESEARCH QUESTIONS	91
1.	Primary Research Question:	91
2.	Subsidiary Research Questions:	93
VI.	RECOMMENDATIONS	99
A.	RECOMMENDATIONS FOR EFFECTIVE IMPLEMENTATION OF FMS/FML SHIP TRANSFER PROGRAMS	99
1.	General Recommendations	99

2.	Recommendations for Improving the Ship Transfer Timeline	104
B.	RECOMMENDATIONS FOR FURTHER RESEARCH	105
APPENDIX.	DETAILED SHIP TRANSFER PROCESS	107
LIST OF REFERENCES	129
INITIAL DISTRIBUTION LIST	133

LIST OF FIGURES

Figure 1.	U.S. Share of World Arms Exports, 1981-1991	8
Figure 2.	United States Government Organization for Security Assistance	19
Figure 3.	Major Security Assistance Authorization Acts Since 1954	23
Figure 4.	Flowchart of AECA Advance Sales Reporting Provisions	26
Figure 5.	International Programs Organization	37
Figure 6.	Navy International Programs Office	38
Figure 7.	"Hot Ship" Transfer Without Industrial Availability	42
Figure 8.	"Hot Ship" Transfer With Post Transfer Industrial Availability	44
Figure 9.	"Cold Ship" Transfer "AS Is, Where Is"	46
Figure 10.	"Cold Ship" Transfer With a Minimal Reactivation	47
Figure 11.	"Cold Ship" Transfer With a Full Reactiva- tion	49
Figure 12.	Transfer Process	50
Figure 13.	Ship Disposition Decision Matrix	52
Figure 14.	Offer Process	54
Figure 15.	Inspections/Briefings/Decision Sequence	57
Figure 16.	Title 10. U.S. Code, Article 7307	58

Figure 17. Legislation	59
Figure 18. Notification	60

I. INTRODUCTION

A. BACKGROUND

The sale of arms has become increasingly important as a result of volatile factions scattered throughout the world. Today, exchange of arms has become big business and consequently a crucial dimension of international affairs. Arms sales are said to be indirect means of ensuring a nation's defense, making it possible for recipient nations to defend their security. They are also instruments of diplomacy, used either to develop closer relations between trading countries or to avoid their deterioration and buy influence, which is banked for use at critical times when the supplier nation needs the support of foreign nations. [Ref. 1:p. 112]

The continuing scientific and technological innovations in our era made it possible to produce more destructive, more accurate and more numerous weapons systems each year. However, especially for developing countries, it's extremely difficult to produce a variety of advanced arms, based on high technology. Often, these countries don't have sufficient internal economic resources for the establishment of an advanced domestic arms industry. But, they still require technologically advanced weapon systems for self defense purposes. In that light, while there are numerous agreements to decrease nuclear arms stockpiles between the super powers, conventional arms transfers continue to play an increasingly important part in promoting international and regional stability while enhancing the security of allies. Thus,

countries will continue to purchase required military weaponry from international sources. [Ref. 2:p. 2]

Beginning with World War II, the United States became one of the major arms suppliers for its allies and friendly countries. First, the U.S. provided arms on a "grant aid" basis. Later, when the recipient countries made significant economic progress, "sales" replaced grant aid. Subsequent to the end of the Cold War and the formal dissolution of the U.S.S.R., Russia's arms agreements lessened, while the U.S. remained the undisputed leader in arms sales to the world. Today, the U.S. approximately accounts for 38% of world arms exports. While the U.S. is the most prolific exporter of arms, arms production outside the U.S. , especially in Western Europe and developing countries is increasing both in scope and sophistication. Also, the expansion of arms production in the developing countries since the end of the World War II has been quite extensive.

Currently, the transfer of military weaponry from the U.S. to other countries is done in three basic ways: grants, loans, and sales (military or commercial). To implement these transfers through the sales program, the U.S. developed the concept of "Security Assistance." Security Assistance is an "umbrella" term for a group of programs in which the U.S. provides defense articles, military training, and other defense related services by grant, credit or cash sales.

B. THESIS OBJECTIVE

The objectives of this thesis are to describe and analyze the Foreign Military Sales/Lease (FMS/FML) ship transfer

process for the turnover of U.S. Navy ships to allied nations under provisions of the Security Assistance program and to improve the effectiveness of the Turkish Navy in procuring U.S. Navy ships through FMS/FML. The FMS ship transfer process will be analyzed using the "Hot Ship" transfer case example of the sale/lease of nine former U.S. Knox Class Frigates to Turkey during 1993-1994. The research and analysis involved in this thesis will contribute to the knowledge needed by foreign officers who will work in conjunction with U.S. officials engaged in the transfers of U.S. Navy ships in the future.

C. RESEARCH QUESTIONS

1. Primary

What are the problematic issues involved with the FMS/FML of nine former U.S. Knox Class Frigates to Turkey, by using the "Hot Ship" transfer method and how can these issues be resolved?

2. Subsidiary

a. What is the Security Assistance Program and what are the procurement possibilities within this program that are available to foreign countries?

b. What are the current FMS/FML ship transfer methods and procedures for the turnover of former U.S. Navy vessels to allied countries under the provisions of the Security Assistance programs?

c. What are the major features associated with the "Hot Ship" transfer of U.S. Naval vessels to allied countries?

d. What are the lessons learned from the FMS/FML ship transfer case of the Knox Class Frigates for Turkey?

D. SCOPE AND LIMITATION OF RESEARCH

The scope of this thesis is limited to an analysis of the United States Foreign Military Sale/Lease policy and procedures for the transfer of naval vessels to allied nations; the U.S. Navy agencies concerned with the transfer process. The analysis is formed on identified problems associated with the FMS/FML "Hot Ship" transfer process with respect to the Turkish procurement of the Knox Class Frigates during 1993/1994.

E. METHODOLOGY

A literature search of all documentation associated with the FMS/FML of the nine Knox Class Ships to Turkey was conducted including FMS/FML statutes, U.S. Navy policies, regulations and Congressional Subcommittee Reports. Information was also obtained from the Defense Institute of Security Assistance Management (DISAM); the Defense Technological Information Center (DTIC); Defense Logistics Studies Information Exchange (DLSIE); the Office of the U.S. Chief of Naval Operations (CNO); and the Naval Headquarters (HQ)/Department of Defense (DoD) equivalent in Turkey.

Interviews were conducted with personnel from the following agencies:

- The U.S. Navy International Policy Office (Navy IPO).
- The Defense Security Assistance Agency (DSAA).

- Program Managers from CINCs that are responsible for the transfer of ships.
- The Turkish Naval Headquarters.
- The military attache of Turkey in the U.S.

After a detailed review of current FMS/FML "Hot Ship" transfer policy and procedures, the FMS/FML transfer of the nine former U.S. Knox Class Frigates to Turkey was analyzed and related problems were identified. As a result of this analysis, potential solutions are proposed to effectively implement future Security Assistance programs between the U.S. and Turkey.

F. ORGANIZATION OF STUDY

Chapter I will discuss the background and the objectives of the thesis.

Chapter II introduces the concept of Security Assistance and explains the history of the U.S. system for arms sales approval. Included in the discussion of Security Assistance is a dissection of the procurement possibilities inherent in this form of military aid that are available to foreign countries.

Chapter III discusses the policies and procedures for FMS/FML of U.S. Navy ships to foreign governments. Included in this chapter is a thorough discussion of ship transfer methods and specifically delineates the differences between "Hot Ship" and "Cold Ship" transfers.

Chapter IV presents an analysis of the Knox Class ship procurement for Turkey. Analyzed within this chapter are all

aspects of the sale/lease procedures followed by Turkey to obtain nine former U.S. Knox Class Frigates. Problematic issues concerning the ship transfer program were discussed as well as lessons learned from the transfer process.

Chapter V presents conclusions and specific issues identified in this study along with answers to the thesis questions.

Chapter VI presents recommendations regarding the effective implementation of future FMS/FML ship transfer programs.

II. SECURITY ASSISTANCE AND THE U.S. SYSTEM FOR ARMS SALES APPROVAL

A. HISTORY

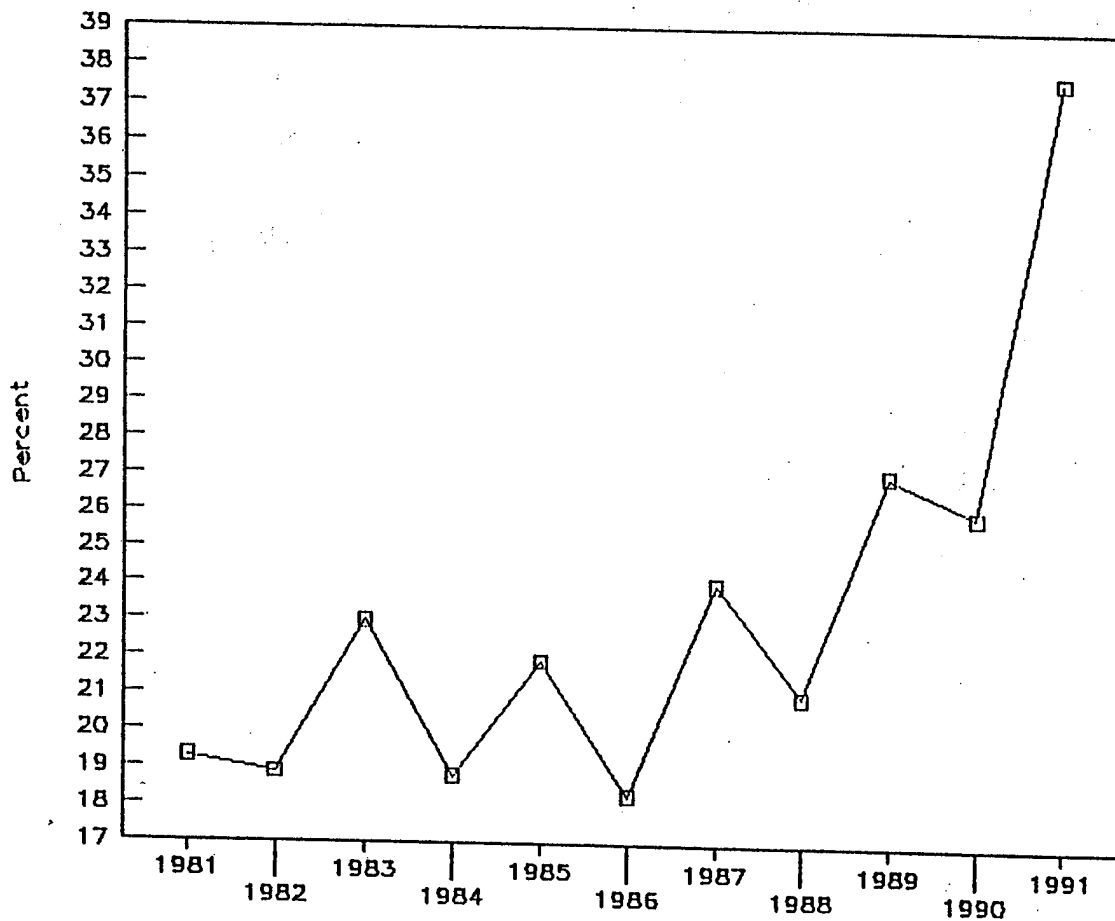
1. The Place of the U.S. in World Arms Sales

The transfer of weaponry has remained a vital part of global relations throughout man's warfighting history. Historically, mankind has sought to gain the advantage over his/her opponent through militaristic dominance. In this struggle for superiority, weaponry transfer has continued to play an integral role in all political relationships between trading nations. Although the desire to procure weaponry has continued, the mechanisms for transfer has changed depending on the political climate, and technology advancement.

Beginning with WWI, the United States became the industrial arsenal and major arms suppliers for its allies and friendly countries. Before 1935, the total annual expenditures for world military system requirements were approximately \$4.5 billion. In today's prices, using the 1991 constant dollars index, these expenditures might represent \$40-50 billion dollars. As of 1991, approximate total world military expenditures were \$1,038 billion. This dramatic increase was due to Third World inventory modernization and expansion, largely financed by profits from export income, particularly oil. Parallel to this upward trend in world arms expenditures, developed countries like the U.S. increased their arms exports. As of 1991, the United States accounted for 37.7% of all world arms exports. [Ref. 3:p. 12]

Although the U.S. has continued to be the foremost arms exporter to the world, its arms exports have fluctuated from

time to time, depending on the administration in power. Figure 1 depicts this fact for the 1981-1992 period. [Ref.3:pp. 14-15]



Source: World Military Expenditures and Arms Transfers, 1991-1992, U.S. Arms Control and Disarmament Agency, March 1994.

Figure 1. U.S. Share of World Arms Exports, 1981-1991

2. U.S.- Turkey Arms Sales

With the advent of the Truman Doctrine of 1947, the United States began a policy of constraining Russian expansionism. This doctrine led to a defensive policy between Turkey and the United States and ensured the eventual inclusion of Turkey into NATO. Since Turkey bordered Russia, the United States had an ally that could protect the Southeastern flank of NATO.

Subsequent to the implementation of the agreements between Turkey and the United States, Turkey began to receive various forms of aid. In July 1947, Turkey received \$122.5 million of economic aid and \$152.5 million in military assistance from the United States. This military assistance was used to enhance the posture of Turkey's Army, Navy and Air Force and to improve other military facilities. Subsequent agreements included the Military Facilities Agreement of June 1954 and the Defense and Economic Cooperation Agreement of March 1980. [Ref. 4:p. 9]

From 1946 to 1992, Turkey received more than \$11 billion in the form of grants, credits, cash sales and other forms of military assistance [Ref. 5:p. 174]. For 1993-1994, Turkey ranked third in a list of countries to accept aid from the United States by receiving \$450 million dollars. [Ref. 6:p. 9]

In 1964, the resilience of the defensive relationship between Turkey and the United States was tested by the events surrounding the Cyprus conflict. Armed skirmishes in Cyprus led to diplomatic attempts at resolving the conflict. After several failed attempts in 1964, Turkey contemplated military

intervention in June 1964. The United States forestalled this intervention by issuing what was commonly referred to as the "Johnson Letter." In this letter, President Lyndon B. Johnson heatedly warned that the U.S. would refrain from honoring its commitment to defend Turkey if the Soviet Union carried out its threat to attack the NATO ally in response to Turkish intervention in Cyprus.

The dilemma posed by Cyprus and Greece, which had plagued Turkey's U.S. defense relations since 1964, reached a new climax in the summer of 1974. A Turkish military intervention in Cyprus on 20 July 1974 led to an arms embargo imposed by the United States under Congressional pressure on the grounds that Turkish utilization of U.S. weaponry violated the U.S. Foreign Assistance Act of 1961 and the Foreign Military Sales Act. This embargo took the form of withholding crucial spare parts and other necessary logistical apparatus. Thus, the United States embargo significantly affected the logistical base of the Turkish military and emphasized Turkey's reliance on American military support. The effects of the Cyprus conflict, the arms embargo and the Greek-Turkish hostility brought American-Turkish relations almost to a breaking point until a new defense agreement was signed on 30 March 1980.

Between 1990 and 1992, Turkey's importance to the United States reasserted itself as a consequence of the Gulf War. The United States recognized the importance of Turkey as it spearheaded combat operations directed against the Iraqi threat. Beginning in August 1990 and lasting until December 1991, Turkey gave its full support for Operation Proven Force--the air combat operations conducted from Turkey as an adjunct

of Operation Desert Shield/Desert Storm - and for Operation Provide Comfort - the coalition effort to provide humanitarian relief to more than 500,000 Kurdish refugees who fled from the Iraqi forces of Saddam Hussein into southeastern Turkey.

B. SECURITY ASSISTANCE

One of the primary methods used to carry out the U.S. foreign national security policy has been the transfer of defense articles, defense military training and economic assistance; or stating it another way, by providing security assistance (SA). As it is defined in documents published by the U.S. Department of Defense (DOD), the term "Security Assistance" is defined as follows:

Groups of programs authorized by the Foreign Assistance Act of 1961, as amended, and the Arms Export Control Act of 1976, as amended, and other related statutes by which the U.S. provides defense articles, military training, and other defense related services, by grant, loan, credit, or cash sales in the furtherance of national policies and objectives. [Ref. 7:p. 327]

In general, the U.S. offers security assistance to strengthen the national security of friendly nations, and to support existing or prospective democratic institutions and market economies. Since World War II, it has become a institutionalized and continuing program used to advance U.S. interests in a global environment. It's not just a short

range program; rather, its a continuing program, the components and magnitude of which change each year due to U.S. national interests and foreign policy objectives. With the President's Congressional Presentation Document (CPD) for SA programs, fiscal year 1994, these objectives are:

- Building Democracy through support of free and fair electives, respect for human rights, the rule of law and economic opportunity.
- Promoting and maintaining peace by supporting peacekeeping efforts, assisting friendly and allied nations, insisting upon verifiable arms control and nonproliferation of weapons of mass destruction, and fostering sustained peaceful development.
- Promoting economic growth and sustainable development by fostering free and open market, trade liberalization, deregulation, privatization, and market based structural reform.
- Addressing global problems of environmental deregulation, narcotics trafficking, terrorism and the other criminal activities by increasing cooperation with allies, friends, and traditional adversaries.
- Meeting urgent humanitarian needs by supporting private and governmental efforts, and by promoting economic reform and resolution of local conflicts [Ref. 8:p. 5].

The Security Assistance program is an important tool for the U.S. Government (USG) to accomplish these objectives.

C. U.S. SECURITY ASSISTANCE PROGRAM COMPONENTS

According to the Congressional Presentation Document for Security Assistance programs, there are five key program

components which require USG funding. If we add the FMS/FML and Foreign Military Construction Sales Program, plus DCS licensed under the Arms Export Control Act (AECA), we arrive at total of seven programs. All procurement of military equipment from the USG to other nations falls within the realm of one of the seven SA programs [Ref. 8:p. 36]. A brief examination of each follows:

1. FMS/FML and Foreign Military Construction Sales Program

Normally, the U.S. Government makes defense articles available to foreign government by FMS under AECA. However, there may be exceptional instances in which a lease agreement would be the most appropriate method whereby U.S. defense articles can be make available to eligible foreign countries or international organizations. Such agreements are authorized under the AECA, Chapter 6 when it is determined that there are compelling foreign policy and national security reasons for providing such articles on a lease rather than for sale. [Ref. 9:p. 1200-1]

With these distinctions, FMS/FML is a nonappropriated program thorough which eligible foreign governments purchase defense articles, services and training from the USG. The purchasing government pays all costs that may be associated with a sale or lease. In essence, there is a signed government-to-government agreement (normally documented on a Letter of Offer and Acceptance (LOA) for sales or a lease agreement for leases) between the USG and a foreign government. The lease will not be provided on an LOA, but the LOA will be used for packing, crating, handling, transportation, and the sale of associated articles and

services, including refurbishment of the defense articles required prior to, during, or after the lease period. The LOA will also be used to recover applicable costs if the article is lost or destroyed during the lease period. Each LOA is commonly referred to as a "case" and is assigned a unique case identifier for accounting purposes.

2. The Foreign Military Financing Program (FMFP or FMF)

This program has undergone a variety of substantive and terminological changes in recent years. At present, the program consists of Congressionally appropriated grants and loans which enable eligible foreign governments to purchase U.S. defense articles, services and training. As a grant and low interest loan program, FMFP is distinguished from FMS/FML, the system through which government-to-government sales of military equipment occur. In general, FMFP provides financing for FMS/FML. Selected countries, however, have been eligible to use FMFP credits for procurement through direct commercial contracts with U.S. firms outside of FMS channels.

Additionally, in FY 1990, the former Military Assistance Program (MAP), was formally merged with the FMFP as Congress adopted a Reagan Administration proposal for integrating all MAP grant funding into the appropriations account for the FMF Program. For FY 1994, the Clinton Administration proposed a total of \$4.087 billion FMF funding, composed of \$3.232 billion in grants and \$855 million in concessional loans. The same proposal includes \$450 million in concessional loans for Turkey.

3. Direct Commercial Sales (DCS) Licensed Under the Arms Export Control Act (AECA)

A direct commercial sale licensed under the AECA is a sale made by U.S. industry directly to a foreign buyer. Unlike the procedures employed for FMS/FML, direct commercial sales transactions are not administered by DOD and do not involve a government-to-government agreement. Rather, the U.S. governmental "control" procedure is accomplished through licensing by the Office of Defense Trade Control in the Department of State.

4. The International Military Education and Training Program (IMET)

This program provides military education and training in the United States and, in some cases, in overseas U.S. military facilities to selected foreign military and related civilian personnel on a grant basis. Since 1950, IMET and its predecessor programs have trained more than 500,000 foreign officers and enlisted personnel in areas ranging from professional military education to basic technical and nation building skills.

In FY 1989, Congress established a prohibition on the use of IMET funds by any country whose annual per capita gross national product (GNP) exceeds \$2,349.00 unless that country agrees to fund from its own resources the transportation costs and living allowances (TLA) of its students. Thus IMET funds have been restricted to financing tuition costs for these countries. For FY 1994, the Administration allocated \$2.8 million for Turkey out of the total proposed program of \$42.5 million.

5. The Economic Support Fund (ESF)

This fund was established to promote economic and political stability in areas where the U.S. has special political and security interests and where the U.S. has determined that economic assistance can be useful in helping to secure peace to avert major economic or political crises. ESF is a flexible economic instrument which is made available on a loan or grant basis for a variety of economic purposes, including balance of payment support, infrastructure, and other capital and technical assistance development projects.

The ESF program is administered by the U.S. Agency for International Development (AID) under the overall policy direction of the Secretary of State. The Administration's FY 1994 request for \$2.53 billion reflects a firm U.S. commitment to assist other countries to achieve economic growth and development.

6. Peacekeeping Operations (PKO)

The Foreign Assistance Act (FAA) of 1961, Part II, Chapter 6, as amended, authorizes assistance to friendly countries and international organizations for peacekeeping operations (PKO). Historically, funding under this statute has for the most part been limited to support of the U.N. Force in Cyprus (UNFICYP) and the Multinational Force and Observers in the Sinai (MFO). With the changing international security environment, the number of situations requiring peacekeeping operations has risen in the early 1990's. Consequently, the amount of this fund can be expected to increase further in the years ahead.

For FY 1994, the Administration proposed a total of \$77.166 million for PKO. This amount funded both long-standing operations in Cyprus and the Sinai and necessary new initiatives in the former Soviet Union, Haiti and Africa.

7. The Nonproliferation and Disarmament Fund

This program is a new element in the security assistance budget. In the last years, the nonproliferation and disarmament of the four nuclear former Soviet Union states (Russia, Ukraine, Belarus and Kazakhstan) has moved to the forefront of the U.S. national security agenda. To help meet these needs, for FY 1994 the Administration proposed \$50 million for a four-part nonproliferation and disarmament program of Education and Training, Destruction and Conversion, Enforcement and Interdiction, and Safeguards and Verification.

D. U.S. GOVERNMENT ORGANIZATIONS FOR SECURITY ASSISTANCE

The U.S. Security Assistance program has its roots in the U.S. public laws which contain security assistance authorizations, appropriations, restrictions and reporting requirements. To understand how this legislation is welded into a coherent, operational foreign policy program, it is appropriate to briefly discuss the roles of the three branches of the U.S. Federal Government with respect to security assistance.

1. Executive Branch: The President

The Constitution of the U.S. establishes the President as the nation's chief executive and, by inference, the chief arbiter in matters of foreign policy. Furthermore, the same constitution empowers the President, by and with the consent of the Senate to make treaties and appoint ambassadors and

other public ministers. The president is also authorized to receive ambassadors and other public ministers - all essential facets of carrying out U.S. foreign policy. Finally, it is the President who presents the recommended annual U.S. assistance program and budget to the Congress for its consideration and executes this program once it becomes law.

As the chief executive, the President is responsible for all of the activities of the Executive Branch. While carrying out all these activities, the President has numerous assistants, cabinet officers, and other subordinate officials to oversee the conduct of the U.S. Security Assistance program. Figure 2 depicts the U.S. Government organization for Security Assistance [Ref 8:p. 76].

2. Legislative Branch: The Congress

The Congress of the U.S., as provided by the U.S. Constitution, is vested with all legislative powers. In terms of security assistance, congressional power and influence are exerted in several ways:

- Development, consideration, and action on legislation to establish or amend basic security assistance authorization acts.
- Enactment of appropriations acts.
- Passage of Joint Continuing Resolutions to permit the incurrence of obligations to carry on essential security assistance program activities until appropriation action is complete.
- Conduct of hearings and investigations into special areas of interest, to include instructions to the General Accounting Office (GAO), the Congressional Budget Office (CBO), and Congressional Research Service (CRS) to accomplish special reviews.

- Ratification of treaties which may have security assistance implications. [Ref. 8:p. 75-77]

With regard to conventional arms transfers or sales, which constitute a major dimension of the U.S. security assistance framework, the ultimate authority for such sales resides in the U.S. Constitution, which assigns Congress the power to regulate commerce with foreign nations. Through the Arms Export Control Act, the Congress has delegated authority to the President to administer the arms transfer program subject to statutorily prescribed standards and conditions.

The work of preparing and receiving legislation is performed largely by committees (and their staffs) of both Houses of Congress. The primary committees of Congress with security assistance legislation responsibility are:

a. Authorizations

House of Representatives, Committee on Foreign Affairs (with various Subcommittees); and, Senate Committee on Foreign Relations (with various Subcommittees).

b. Appropriations

House of Representatives, Committee on Appropriations (Subcommittee on Foreign Operations); and, Senate Committee on Appropriations (Subcommittee on Foreign Operations).

c. Special Topics

At times, interest will also be expressed by other committees on special topics, e.g., Armed Services Committees; Banking, Finance, and Urban Affairs Committees, etc.

3. Judicial Branch: The Courts

According to the Constitution of the U.S., Federal courts are responsible for interpreting federal laws and determining the constitutionality of U.S. law. Normally, the courts have had limited involvement in the day-to-day activities of security assistance. However, in holding all statutory "legislative veto" provisions unconstitutional, the Supreme Court of the U.S. invalidated several clauses of the Arms Export Control Act which permitted a "legislative veto" of certain security assistance transfers. [Immigration and Naturalization Service vs. Chadha (1983)] These clauses were amended in 1986. Judicial involvement is also possible should a contractor, who is providing materials or services under a DOD contract associated with FMS, decide to pursue legal remedy in the event of a dispute through an appropriate federal court.

E. CONGRESSIONAL AUTHORIZATIONS AND APPROPRIATIONS

Funding for certain security assistance programs must be authorized and appropriated. Five such programs include: the International Military Education and Training (IMET); the Foreign Military Financing Program (FMFP); the Economic Support Fund (ESF); Peacekeeping Operations (PKO); and the Nonproliferation and Disarmament Fund (NDF). Foreign military cash sales/leases and commercial exports are also addressed in security assistance legislation - not from a funding standpoint, since U.S. appropriated dollars are not involved, but from a reporting, control and oversight perspective.

1. Authorization Acts

With respect to the current U.S. SA program, two basic laws are involved. They are: (1) the Foreign Assistance Act (FAA) of 1961 as amended, and (2) the Arms Export Control Act (AECA) as amended. Both the FAA and AECA follow a succession of earlier predecessor acts which served as the basis for many of the provisions in the FAA and the AECA.

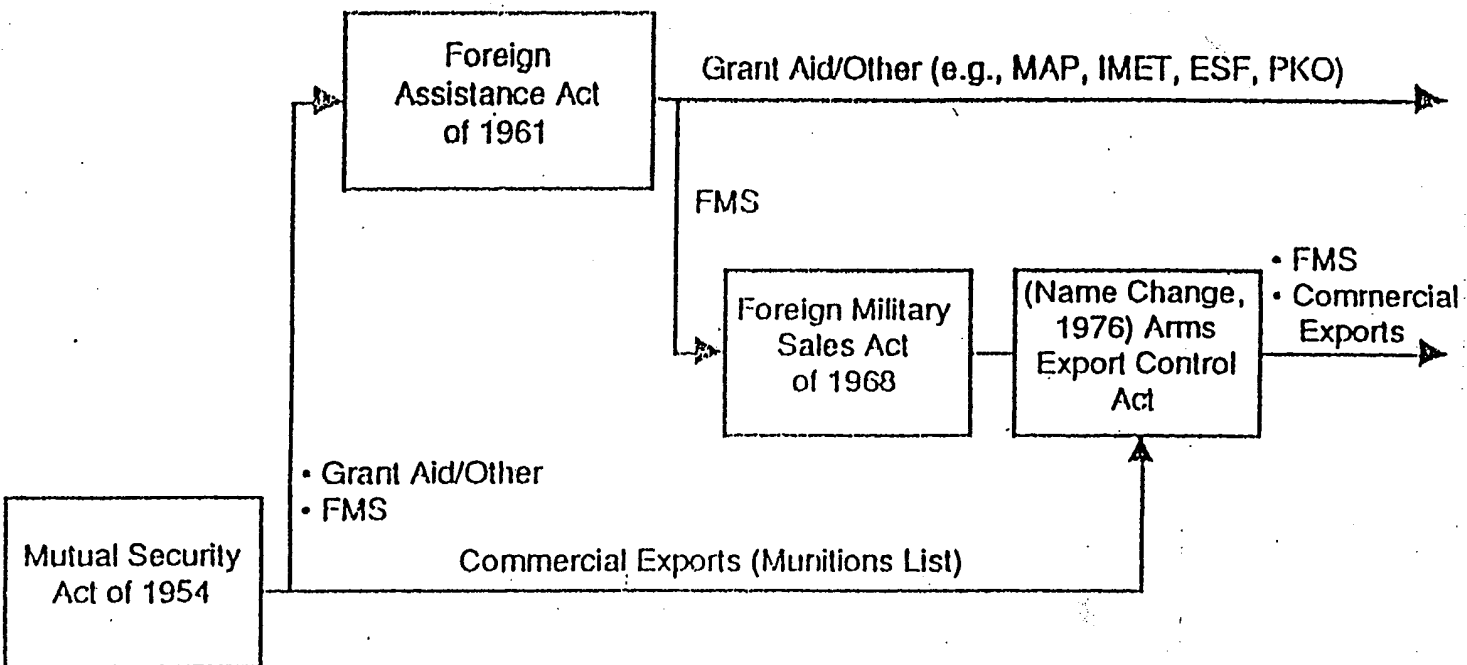
a. The Foreign Assistance Act (FAA)

This act, originally enacted on 4 September 1961, contains many provisions which were formerly in the Mutual Security Act of 1954. Today, the FAA is the authorizing legislation for IMET, ESF, PKO, overseas assistance program management, transfer of excess defense articles (EDA), and a wide variety of other foreign assistance programs.

b. The Arms Export Control Act (AECA)

This act came into being under a different title, i.e., the Foreign Military Sales Act of 1968 (FMSA). Before 1968, the basic authority for foreign military sales was the FAA. The FMSA served to incorporate the Foreign Military Sales Program under a new and separate act. The International Security Assistance and Arms Export Control Act of 1976 changed the title of the FMSA to the AECA. The AECA is the statutory basis for the conduct of FMS/FML funding for FMFP and the control of commercial sales of defense articles and services.

The FAA and the AECA may be amended by annual or biennial security assistance authorization acts. Figure 3 addresses the various acts discussed above in the context of their relationship to one another [Ref. 8:p. 50].



Source: The Management of Security Assistance, DISAM, 1994.

Figure 3. Major Security Assistance Authorization Acts Since 1954

2. Appropriation Acts

Security Assistance appropriations are included in the annual "Foreign Operations, Export Financing, and Related Programs Appropriations Act" for each year. As its title suggests, this act is the appropriation authority for several programs, including security assistance.

If a new fiscal year begins before an appropriation act has been approved, Continuing Resolution Authority (CRA) is essential to keep the funded foreign assistance programs from coming to a standstill. CRA is defined as:

The authority to obligate funds against the FMFP, IMET, ESF, or other related security assistance appropriation for the new fiscal year under a Continuing Resolution (CR) granted by Congress in a Joint Resolution making temporary appropriations prior to passage of the regular appropriations act, or in lieu of such an act. Normally, however, the CRA is for a designated period less than a fiscal year, and such a CRA does not usually allow funding for the start of any new programs. [Ref. 8:p. 51]

For example, on 1 October 1992, there was no completed FY 93 legislation for funding of military assistance and other U.S. assistance programs. Consequently, an omnibus CR was signed on that date extending foreign assistance programs through 5 October 1992. On 6 October 1992, the FY 93 Foreign Operations Appropriations Act, was signed into law. For FY 1994, the Foreign Appropriations Bill was enacted at the final moments of FY 93 (On 30 September 1993) so that prior year funds could be reallocated in support of FY94 assistance to the new independent states of the former Soviet Union.

3. Conditions of Eligibility

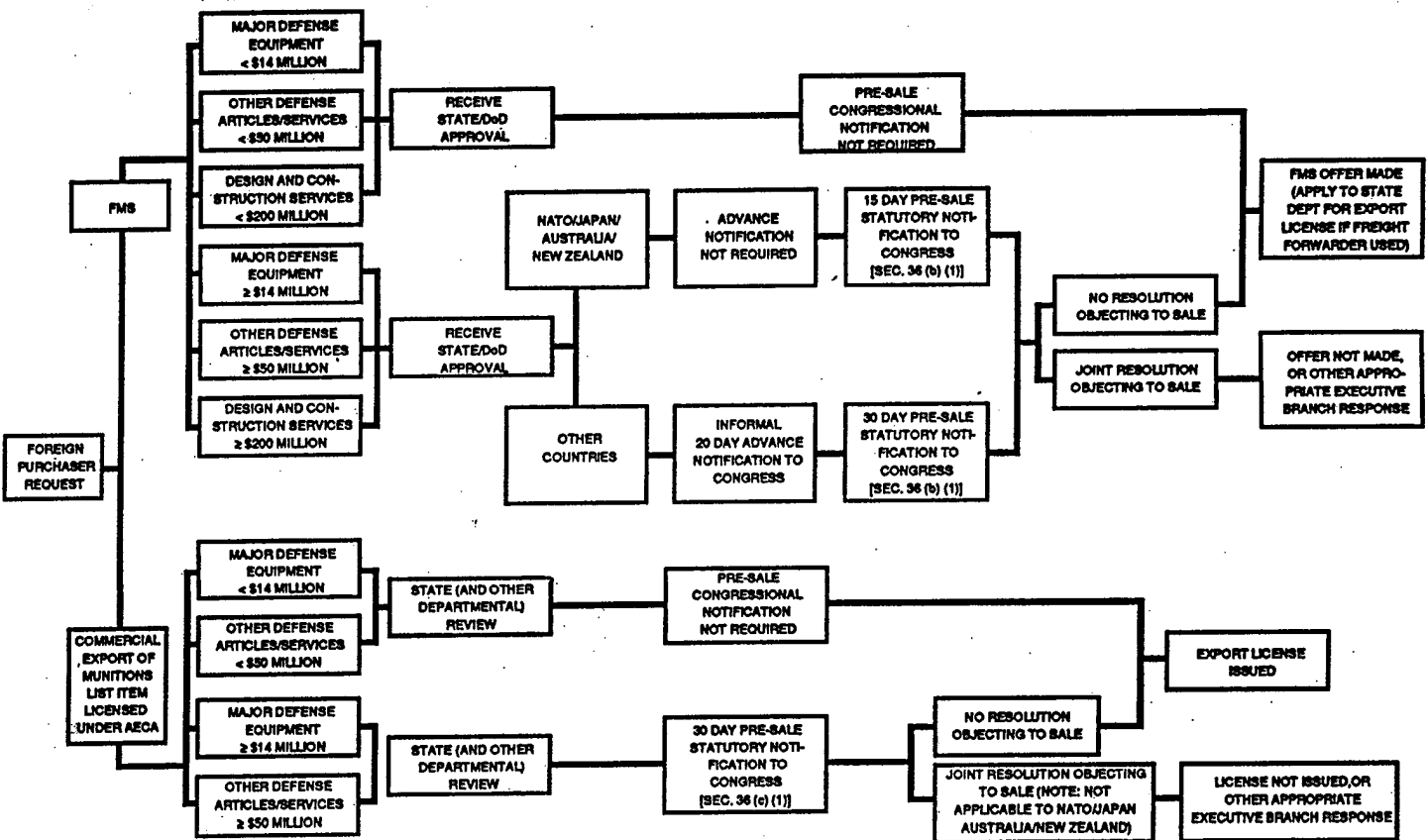
While the U.S. government offers a variety of security assistance programs to its allies and friendly nations, there are also some restrictions for those countries which can not fulfill some requirements for the U.S. security assistance program. All these requirements are listed in the FAA and AECA.

F. NOTIFYING CONGRESS

The Arms Export Control Act (AECA) of 1976 requires the President to notify the Congress of certain defense trade export applications prior to their approval. Figure 4 provides a flow chart contrasting the FMS and commercial export sale review provisions [Ref. 8:p. 62].

1. Foreign Military Sales/Leases

The AECA requires the President to submit a numbered certification (with justification, impact, etc.) to the Congress before issuing a letter of offer to sell or lease agreement to lease defense articles or services for \$50 million or more, or any design and construction services for \$200 million or more, or major defense equipment for \$14 million or more. The LOA or lease agreement shall not be issued if the Congress, within 30 calendar days after receiving such certification, adopts a joint resolution stating it objects to the proposed sale or lease, unless the President states in his certification that an emergency exists which requires such sale or lease in the national security interest of the U.S. [Ref. 10:Secs. 61-64]. In order to provide the Congress with sufficient time to review such cases, the Defense Security Assistance Agency (DSAA) has



Source: The Management of Security Assistance, DISAM, 1994.

Figure 4. Flowchart of AFCA Advance Sales Reporting Provisions

agreed to provide the Congress with 20 days advance notification of such cases prior to the formal submission of the 30 day statutory notification [Ref. 9:Sec. 703].

An exception to the above procedure exists for NATO member countries, Japan, Australia, and New Zealand. For these "exempted" countries, the formal statutory notification period is only 15 days. Furthermore, the 20 days advance notification period is not required for these exempt countries.

2. Congressional Joint Resolutions

As indicated above, the AECA contains provisions for the congressional rejection of proposals for specific types of FMS and direct commercial sales. The mechanism for such Congressional action is a joint resolution.

This is a statement of disapproval of a proposed sale, transfer, or lease, which is passed by simple majority votes in both the Senate and the House of Representatives. Such a joint resolution must be sent to the President for review and approval. Since the President is unlikely to approve the rejection of an action which his Administration originally proposed to Congress, the President will likely veto such a joint resolution, returning it to Congress. Unless Congress is able to override the President's veto by obtaining a two-thirds majority vote in each House in support of the original resolution of rejection, the sale, transfer, or lease will be permitted. However, if Congress can muster sufficient votes to override the President's veto, the proposed sale, transfer, or lease would not be permitted.

G. SUMMARY

Through the Security Assistance program, the U.S. has remained the undisputed leader in arms sales to the world. From 1935 to 1991, total world arms sales have risen from \$40 to \$1,038 billion dollars, U.S. accounting for 37.7% of all world arms exports. Since 1991, the U.S. has continued this trend, with the inclusion of increased arms exports to countries such as Turkey. This European nation now ranks third in a list of countries to accept aid from one of seven components of the Security Assistance program whose primary objective is to fulfill U.S. foreign national security policies. These seven components of the Security Assistance program are: FMS/FML and Foreign Military Construction Sales program, the Foreign Military Financing Program, the Direct Commercial Sales licensed under the Arms Export Control Act program, the International Military Education and Training program, the Economic Support Fund, Peacekeeping Operations, and the Nonproliferation and Disarmament Fund.

All of these components are implemented through authorizations, appropriations and policies from the Executive, Legislative and Judicial branches of the U.S. Government. With respect to the current U.S. Security Assistance program, two basic laws are involved: The Foreign Assistance Act is the authorizing legislation for IMET, ESF, PKO; while the Arms Export Control Act is the statutory basis for the conduct of FMS/FML funding for FMFP and the control of commercial sales of defense articles and services. Additionally, the Arms Export Control Act requires the President to notify Congress of any defense trade export applications for \$50 million or

more, design and construction services for \$200 million or more, and for major defense equipment for \$14 million or more. Both laws also specify conditions of eligibility for which countries must fulfill to qualify for Security Assistance program aid. Additionally, Congress also has authority to override any Presidential action concerning the Security Assistance program through a Congressional Joint Resolution. Regardless of these many limitations however, the Security Assistance program continues to increase, making the U.S. the leader in world arms exports.

III. FMS/FML TRANSFER PROCESS OF U.S. NAVAL SHIPS TO FOREIGN GOVERNMENTS

A. SCOPE

The overall objective of this chapter is to outline and describe the policy and process involved in transferring U.S. Naval ships to foreign governments through FMS or FML procedures. It provides guidance and procedures for the transfer of ships which have been or will be, removed from service in the U.S. Navy. It does not apply to the sale and delivery of Naval ships to foreign customers through new procurement.

Although every ship transfer will be different, each will generally fall within one of the five transfer methods which are described later in this chapter. The processes described in this chapter contain the tools needed to successfully complete such transfers. In the following chapter, the issue will be analyzed by a "Hot Ship" transfer example of the sale/lease of nine former U.S. Knox Class Frigates to Turkey during 1993-1994.

B. THE U.S. NAVY SHIP TRANSFER PROGRAM

1. Background

The management of all sales, leases, loans and grants of U.S. Navy ships fall under the purview of the FMS Security Assistance program. Ship transfers support the U.S. foreign policy objectives by satisfying defense requirements of allied and friendly countries and by strengthening mutual defense arrangements with those countries. The transfer of U.S. Navy ships significantly improves the capabilities of friendly

foreign navies. Additionally, it allows foreign governments to make conservative investments (compared to the cost of new construction) to acquire and modify U.S. Navy ships for their own operations.

Since both the FMS and FML of ships are managed under the same FMS program, policies, responsibilities, and transfer methods are similar. The primary difference between selling and leasing a ship depends on the status of the ship. Although the sale of ships is preferred, leasing of USG ships may occur:

- For compelling U.S. foreign policy or national security reasons.
- When ships do not meet FMS criteria.
- When ships are not needed for public use during the period of the lease.

The primary policy sources for U.S. Navy controlled ship transfers via FMS or FML are as follows:

- DOD 5105.38M (Military Assistance and Sales Manual).
- SECNAVINST 4900.48 (Transfer of USN Vessels to foreign governments and International Organizations).
- SECNAVINST 4900.45 (Lease of Department of Navy Controlled Defense Articles to Foreign governments and International Organizations).
- DOD 7290.3-M (Foreign Military/Lease Financial Management Manual).

Under the provisions of these documents, the following are some pertinent policies, responsibilities, and transfer methods concerning FMS/FML agreements. Expenses incurred due to the implementation of these policies are to be stipulated in the FMS/FML contractual agreements.

2. U.S. Navy Ship Transfer Policies

The U.S. Navy policies that govern ship transfers are as stated below:

a. Cost Allocation

It is the U.S. Navy policy to transfer ships to foreign customers with minimum cost to the U.S. Government. Under this policy, the routine costs of holding and maintaining a ship prior to transfer of title to the recipient are the responsibility of the U.S. Navy and will be funded from direct Navy Appropriations. The cost of any overhaul reactivation, modernization, repair, or non-routine maintenance (e.g., painting) performed after a foreign customer has officially requested transfer of the ships which is performed for their benefit is paid by the customer. A Letter of Offer and Acceptance is prepared to recover the costs of any work performed for the benefit of the customer and such costs are recovered through FMS procedures. Additionally, upon transfer of a ship at a foreign location for the convenience of the customer, the full costs of delivery to the foreign location including personnel, operating, travel and per diem costs of returning the crew to their homeport is charged to the customer.

b. Transfer Ship Conditions

Ships are transferred with as complete a configuration as possible. Stripping or otherwise degrading the ships that are designated for transfer is not allowed. An exception to this occurs where the CNO specifically authorizes a transfer with a justification.

c. Repair Work

No repair work, modernization, or similar actions for the benefit of the foreign country will commence prior to notification of and, where applicable, approval of the transfer by Congress, the receipt and deposit of foreign government funds and issuance of fund authorization documents to the performing Naval activities. An exception to this occurs where the customer accepts an FMS Case for the work and assumes the risk that the transfer may not occur.

d. "Hot Ship" vs "Cold Ship" Transfers

If practical, transfers are effected on a "Hot Ship" basis, wherein the foreign crew relieves the watch of the U.S. Navy crew coincident with the decommissioning of the ship from the USN. Hot Ship transfers are mutually beneficial since inactivation costs for the U.S. Navy and reactivation costs for the recipient navy are minimized. When "Hot Ship" transfer is not possible ship's status is changed to "Cold Ship" and placed in the custody of Inactive Fleet and berthed in safe storage awaiting transfer. [Ref. 11:p. 4]

e. Training and documentation

Training and documentation will be sufficient to allow the safe and effective operations of the ship and her weapon systems. Tactical publications, operations plans,

orders and directives are not transferred with the ship, regardless of classification. Additionally, tactics will not be taught. If some of the tactical documentation are desired by the recipient navy and are authorized for release, they are provided separately by the Navy International Policy Office (Navy IPO) under an appropriate FMS support case. [Ref. 12]

f. Leases

Leases shall be for a fixed period not to exceed five years. Title to leased Department of the Navy controlled vessel shall remain in the U.S. Government. On completion or termination of a lease and if a lease renewal, ship sale, or other permanent transfer is not negotiated, the recipient navy is responsible for returning the ship to the location specified in the lease. [Ref. 11:p. 3]

g. Post Transfer Support

Coincident with the transfer, the customer Navy may purchase follow-on logistics and technical support from the USG through FMS procedures or directly from commercial sources.

3. Responsibilities

All transfers of USN ships are coordinated with the Offices of the Secretary of Defense (OSD), the Secretary of the Navy (SECNAV), and the Department of State and are authorized only after satisfaction of statutory Congressional oversight requirements. The major U.S. Navy organizations take part in the ship transfer process are as follows:

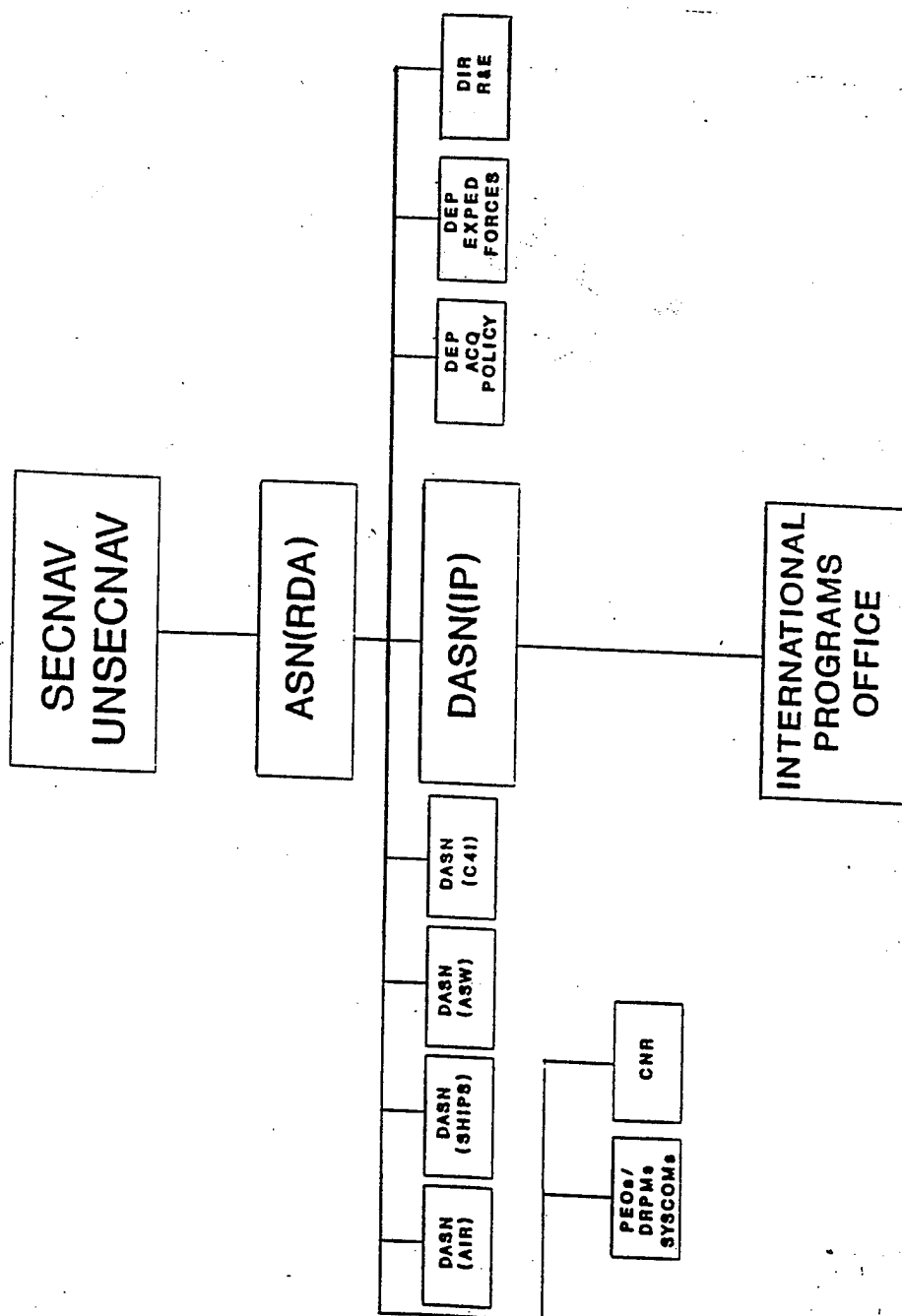
a. The Navy International Policy Office (Navy IPO)

The Navy IPO, under the authority, direction, and control of the SECNAV, the Assistant Secretary of the Navy for Research, Development and Acquisition, and Deputy Assistant Secretary of the Navy for International Policy, is responsible for ship transfer program planning, implementation, and execution. Figure 5-6 depicts the place of the Navy IPO under the SECNAV organization. In order to facilitate its responsibilities the Navy IPO will:

- Act as the USN primary point of contact.
- Develop and disseminate a transfer plan.
- Identify the implementing agent.
- Coordinate transfer preparation decisions.
- Coordinate releasability determination.
- Coordinate the time and place of the transfer.
- Prepare the LOA or the lease agreement for approval.
- Provide necessary information to the implementing agent. Authorize use of FMS funds.

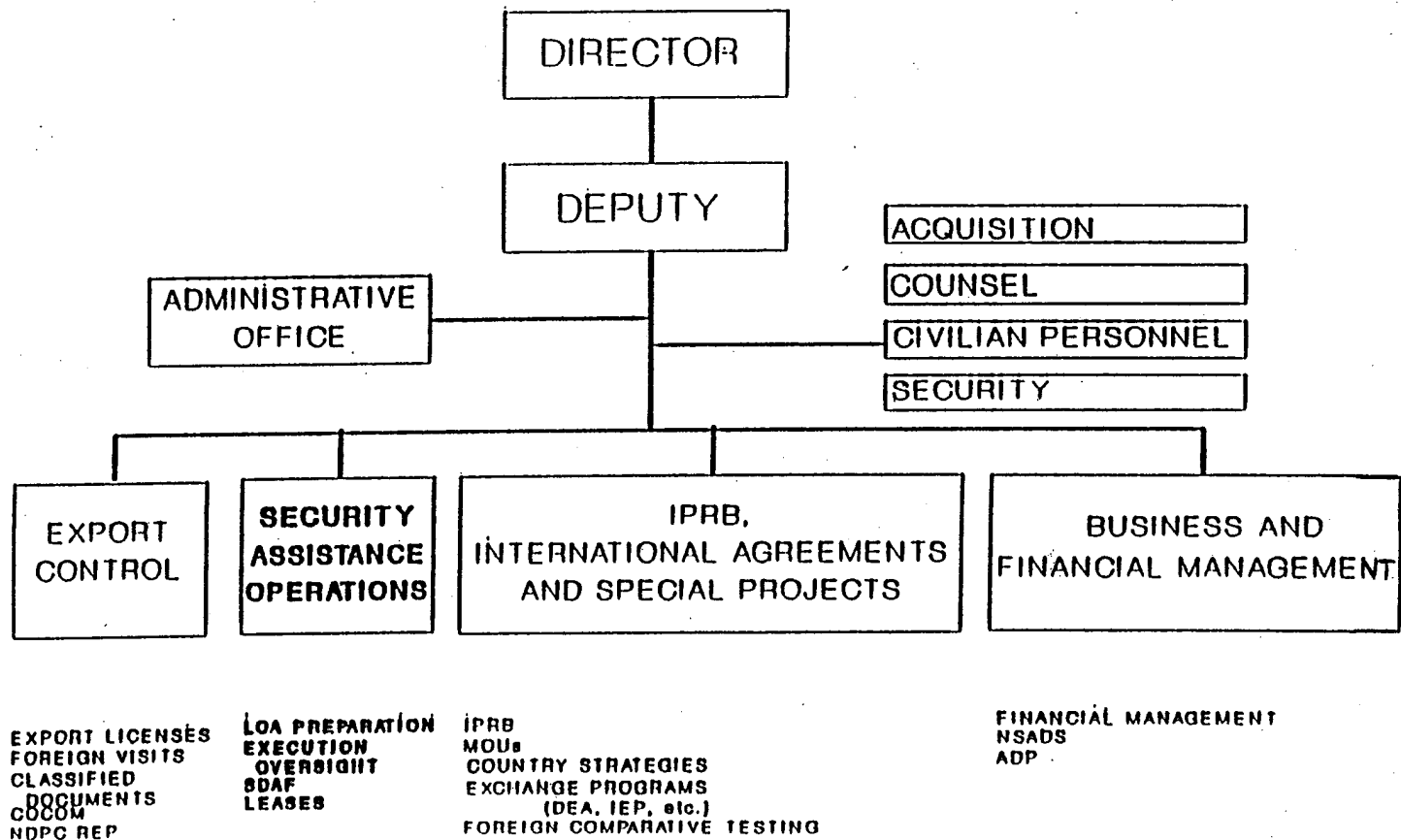
b. The Chief of Naval Operations (CNO)

The CNO is responsible for disposition of ships, identification of ships to be transferred, and obtaining appropriate approval to offer ships available to the customer Navies.



Source: The Management of Security Assistance, DISAM, 1994.

Figure 5. International Programs Organization



Source: The Management of Security Assistance, DISAM, 1994.

Figure 6. Navy International Programs Office

c. The Implementing Agent

The Implementing Agent for all "Hot Ship" transfers will normally be either the Commander in Chief, U.S. Atlantic Fleet (CINCLANTFLT) or the Commander in Chief, U.S. Pacific Fleet (CINCPACFLT). The Commander, Naval Sea Systems Command (COMNAVSEASYSKOM) will be the Implementing Agent for the transfer of ships which have been inactivated (Cold Ship) and are in the custody of the Director, Inactive Fleet. Additionally, COMNAVSEASYSKOM is normally responsible for follow-on technical support management after decommission of the ship. In order to facilitate its responsibilities, the implementing agent:

- Prepares the ship for transfer.
- Hosts the foreign crew.
- Provides necessary security for the ships prior to transfer to the foreign government.
- Coordinates the foreign crew training.
- Provides/coordinates logistic, communication, and administrative support as authorized.
- Arranges and conducts the transfer ceremony, acting as CNO representative.

d. The Navy Education Training Security Assistance Field Activity (NETSAFA)

The NETSAFA is the U.S. Navy's executive agent for Security Assistance training. This field activity provides formal training in the areas of engineering, weapons, ASW and electronics. Additionally, it provides "on-the-job" training

(OJT) in order to improve the watch station qualification of the foreign crew for the accomplishment of "safe-to-steam" or "combat ready" requirements.

4. Ship Transfer Methods

Five basic methods of FMS/FML ship transfer have developed from the common processes experienced over the last several decades. Each method reflects the foreign customer's general range of service and support requirements. It also reflects the funding normally available, and the capabilities and limitations of the Implementing Agent assigned to the case. For both FMS and FML cases, all service and support costs associated with these methods of transfer are normally provided through the cost-reimbursement contract of the FMS. Each method is considered a general framework from which considerable flexibility and adjustment will be needed. The following are the are the five transfer methods:

- "Hot Ship" Transfer Without an Industrial Availability.
- "Hot Ship" Transfer With Follow-On Industrial Availability.
- "Cold Ship" Transfer - "AS IS, WHERE IS."
- "Cold Ship" Transfer With Minimal Reactivation.
- "Cold Ship" Transfer With Full Reactivation.

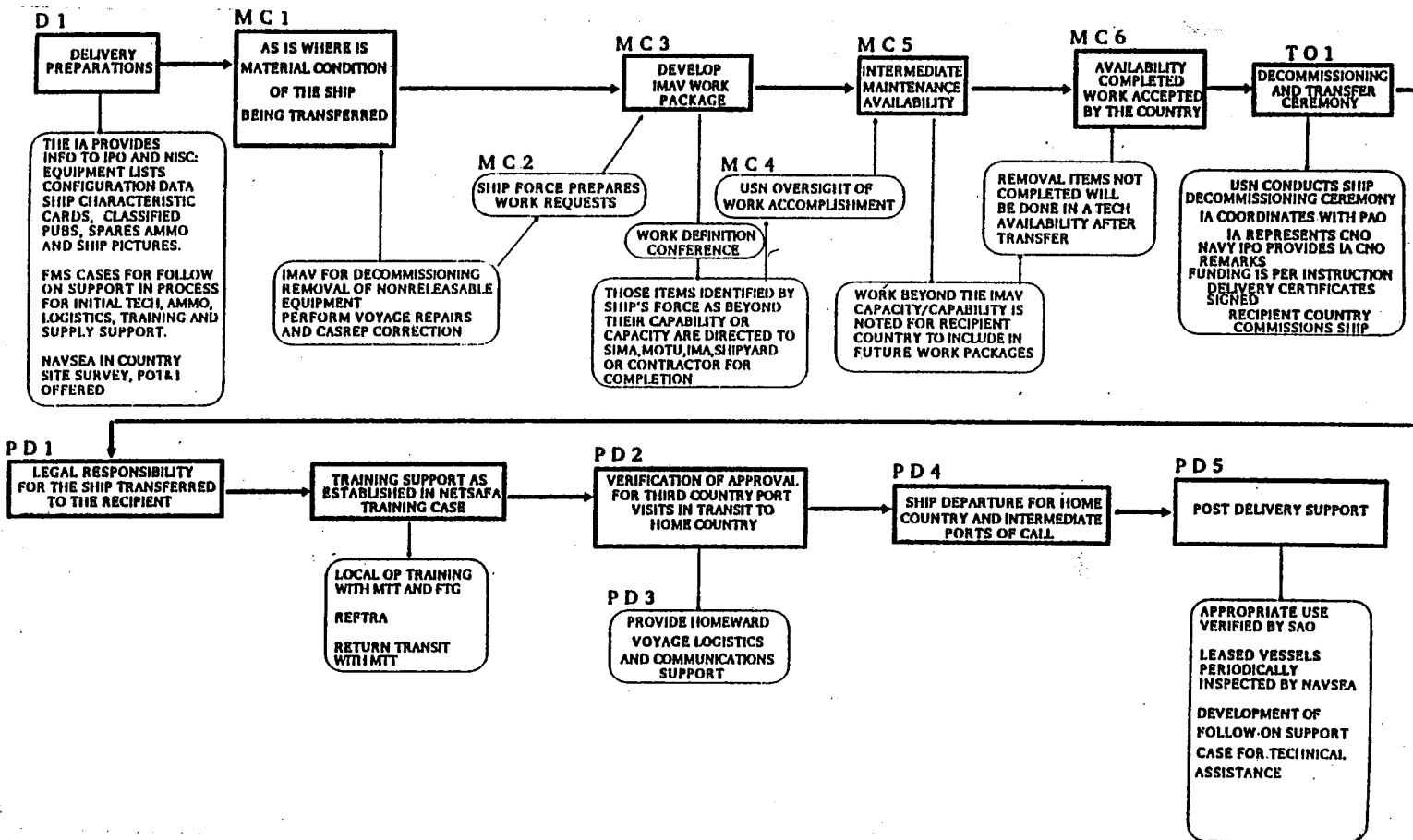
a. "Hot Ship" Transfer Without an Industrial Availability

"Hot Ship" transfer refers to the active status of the vessel. Ships that are "hot shipped" have an active duty

U.S. Navy crew on them and are operational U.S. Navy vessels. Upon U.S. Navy decommissioning, a transfer ceremony officially transfers the vessel to the foreign government. The foreign crew then sails the vessel to their home port. The CINCLANFLT or CINCPACFLT is the assigned Implementing Agent responsible for executing the transfer plan. The following are the main features of this type of transfer:

- A "Hot Ship" transfer is the most beneficial method for both the U.S. Navy and the foreign government. The U.S. Navy saves money that would be expended in laying up the ship. The foreign government will receive a currently operational asset of the U.S. fleet that requires minimal transfer related repair/reactivation expenditure on their part. They will expend funds, for only performing homeward voyage repairs.
- Availability of USN crew provides valuable on-the-job training (OJT).
- Allows the foreign crew to conduct at-sea training with U.S. Navy assets.
- Combines decommissioning/transfer ceremony.
- Although a "Hot Ship" transfer is preferred, if time does not permit an orderly turnover to occur, it should be avoided as it can tie up fleet assets needed to support USN obligations and requirements.
- Preparation time is constrained in time by ship decommissioning date.

Figure 7 depicts the detailed process for this kind of ship transfer method.



Source: The Ship Transfer Guide, NAVSEASYS COM, 1993.

Figure 7. "Hot Ship" Transfer Without Industrial Availability

b. "Hot Ship" Transfer With Follow-On Industrial Availability

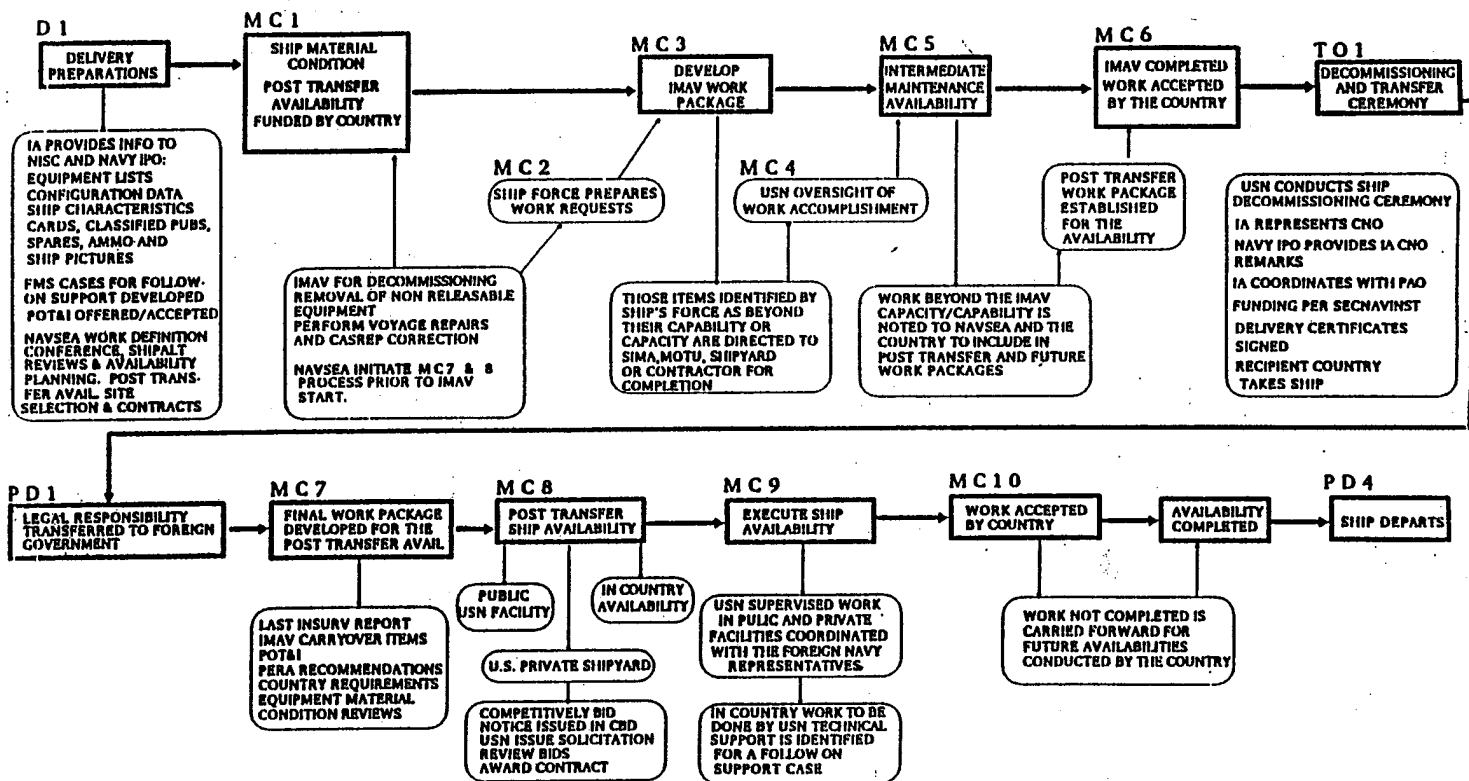
This method of transfer has the same advantages of the previous process. Additionally, it provides the customer country an opportunity to perform shipyard level repairs and modernization after acceptance of the ship. The U.S. Navy benefits by having leased ships upgraded at no additional cost. One disadvantage with this method however, is the fact that the customer country must expend more finances. The transfer management responsibilities pass from the fleet CINC to NAVSEASYSKOM after decommissioning of the ship. Figure 8 depicts the flow process for the transfer and Follow-On Industrial Availability.

c. "Cold Ship" Transfer - "As Is, Where Is"

"Cold Ship" refers to a deactivated ship that is moth-balled in a storage facility. This method allows transference of the ship in its current deactivated state - "as is, where is." Since the ship is removed from the Inactive Fleet safe stowage and is transferred directly to the foreign government, this method of transfer normally consists of purchasing the ship and it's onboard repair parts, fuel, lube oil, and other provisions. If the ship cannot get underway, it is necessary to arrange for the transportation, (i.e., tow, heavy lift) of the vessel back to the purchasing country. For all "Cold Ship" transfers, the Navy IPO assigns the Implementing Agency responsibilities to NAVSEASYSKOM which provides for all transfer services and support on a cost-reimbursement basis through an FMS case. The followings are the main features of this type of transfer:

Source: The Ship Transfer Guide, NAVSEASYS.COM, 1993.

Figure 8. "Hot Ship" Transfer With Post Transfer Industrial Availability

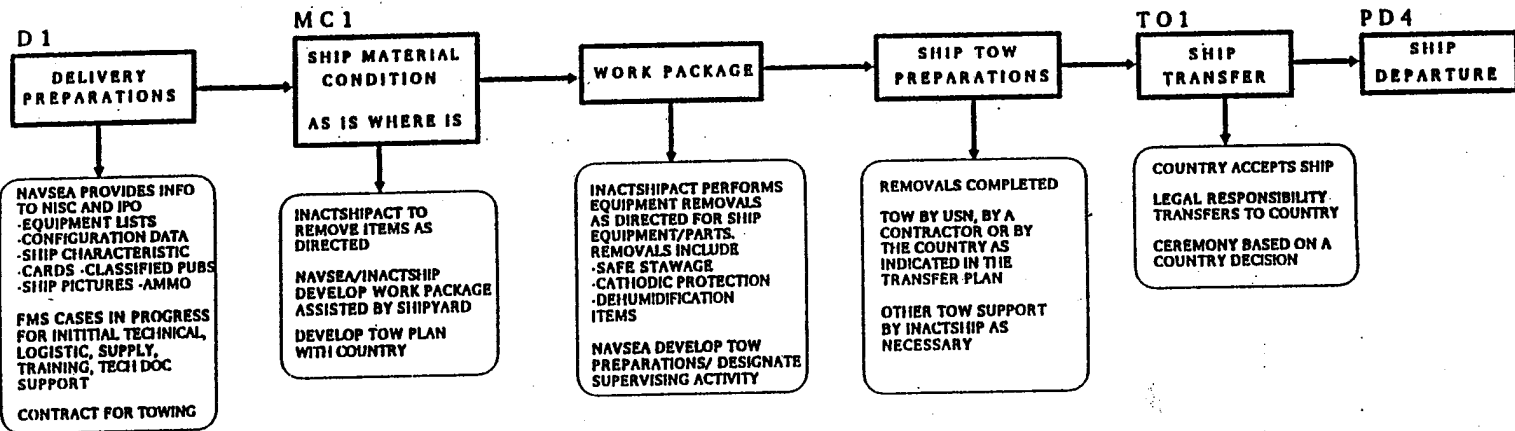


- Although this method is less costly than other transfer methods, the recipient navy has no assurance that the ship will be operational.
- Transfer schedule is not time constrained by fleet operations.
- No industrial work is performed except to ensure that the vessel can be transported safely from the U.S. and that all required equipment removals are completed.
- The transfer ceremony is not required unless it is requested by the customer country.

Figure 9 provides an overview of the general process in executing this transfer.

d. "Cold Ship" Transfer With Minimal Reactivation

This method of transfer provides the minimum acceptable effort for a "Cold Ship" vessel leased to a foreign government. Generally, the cold-ship is taken from an Inactive Ship Maintenance Facility (INACTSHIPACT) and activated to a safe to steam status by correcting deficiencies in the navigation, engineering, damage control and fire fighting areas. This enables the ship to safely sail back to the receiving country where the country can continue other repairs/modernization activities with their own assets at their own pace. As a main advantage, the foreign country receives an operational vessel from the U.S. Navy at a relatively low cost. The NAVSEASYS COM is designated as the Implementing Agent and is responsible for executing the transfer. The full range of transfer services is provided to include logistics, and training. Figure 10 provides an overview of the general process in executing this transfer.

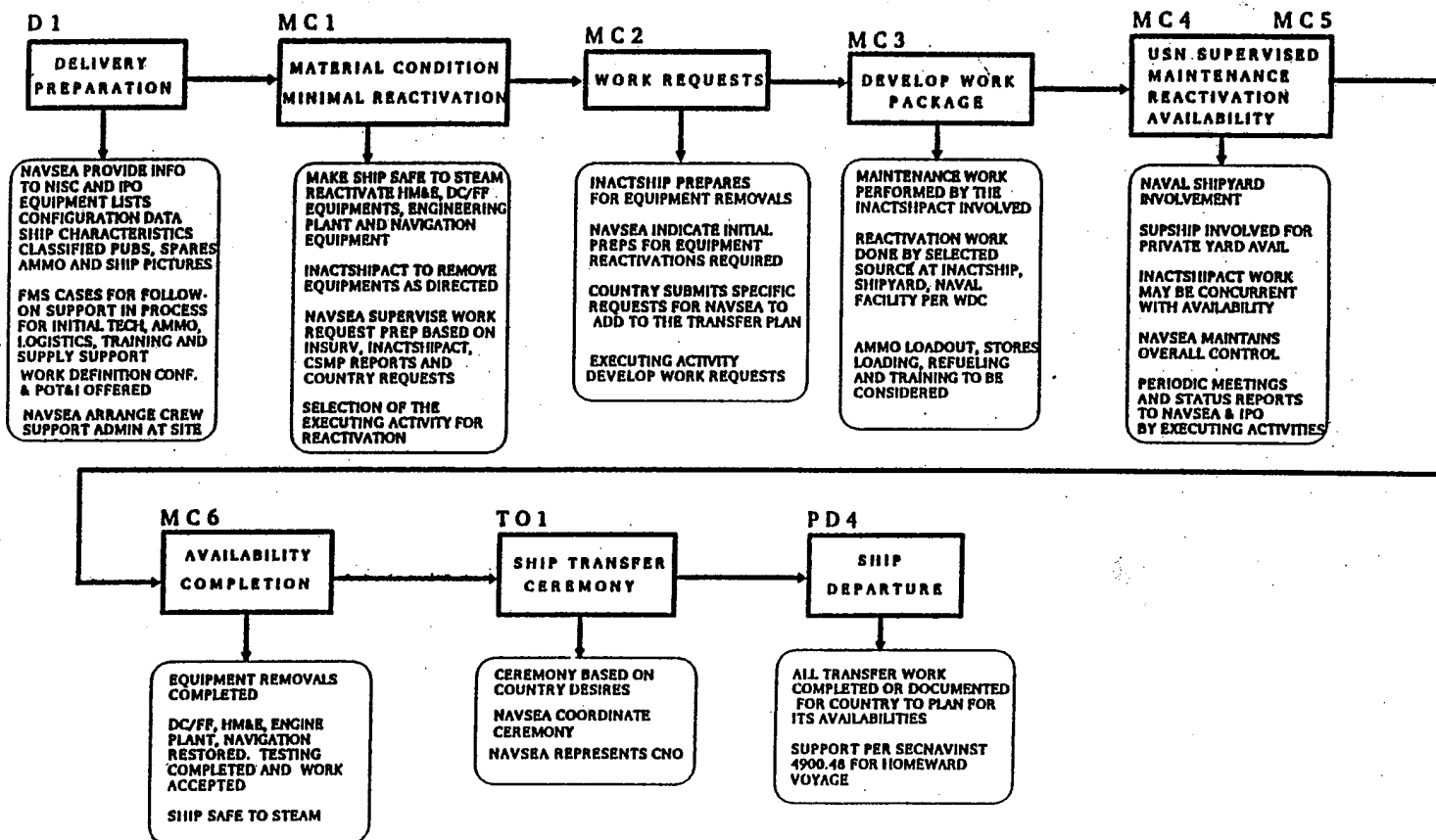


Source: The Ship Transfer Guide, NAVSEASYSKOM, 1993.

Figure 9. "Cold Ship" Transfer "As Is, Where Is"

Source: The Ship Transfer Guide, NAVSEASYS COM, 1993.

Figure 10. "Cold Ship" Transfer with a Minimal Reactivation

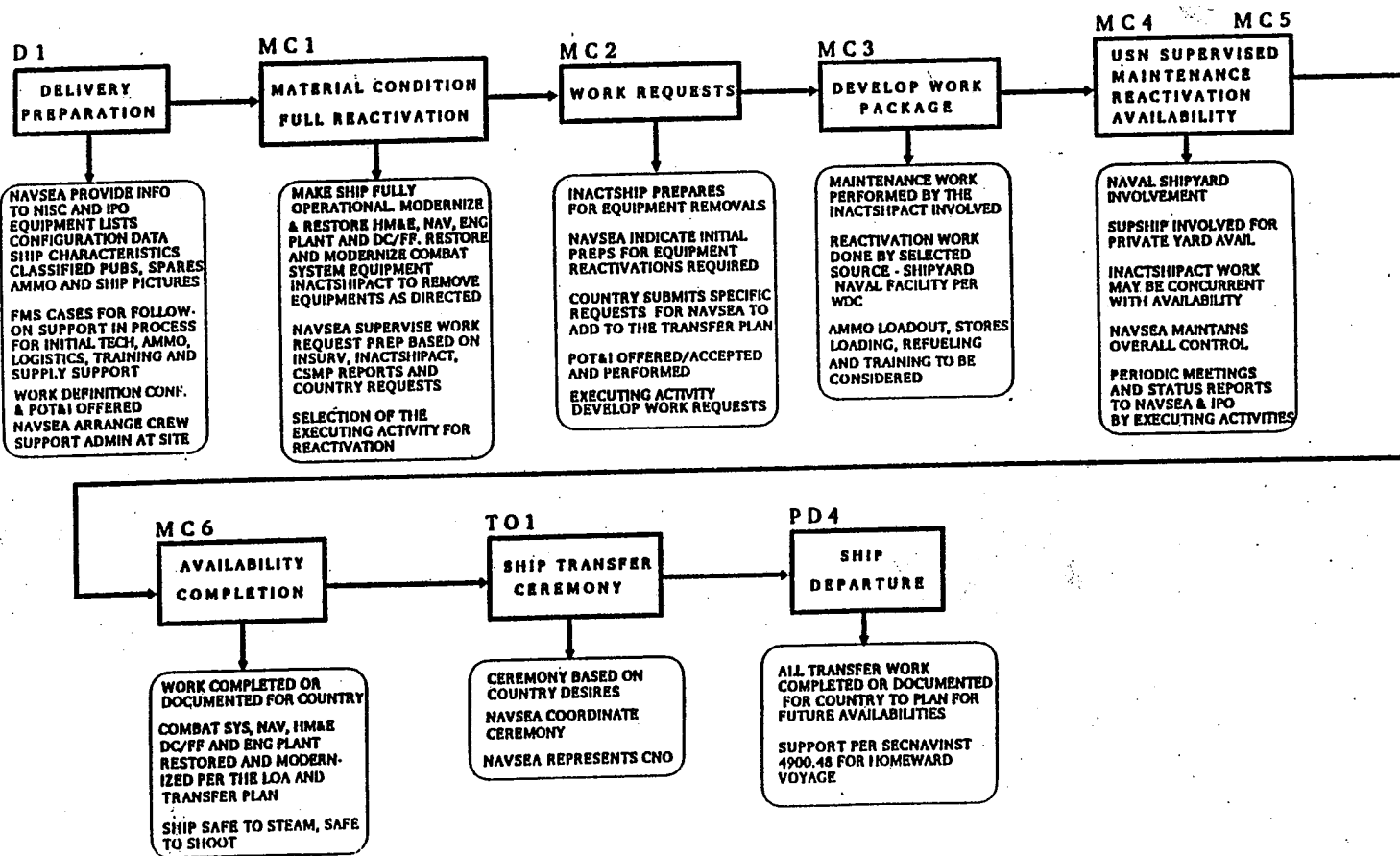


e. "Cold Ship" Transfer With Full Reactivation

This method of transfer is generally the most expensive. However, it provides the foreign country with a fully operational ship that should require minimal industrial maintenance for several years after completion of the transfer. This effort contains similar elements as in the preceding method except the scope of work and associated problems will be much greater. . Normally all combat systems are made fully operational and many mission related system and equipment are modernized to the extent funded by the recipient country. This method is not time constrained by USN requirements and usually takes a year or more to execute. This should permit better planning and more opportunity for foreign crew members to complete formal schools as well as team training. The NAVSEASYS COM is designated as the Implementing Agent. This type of transfer effort will be similar to a complex overhaul of an active U.S. Navy ship. Figure 11 depicts the flow process for the transfer to be accomplished.

C. THE SHIP TRANSFER PROCESS

Ship transfers are complex transactions which require coordination among many U.S. Navy organizations and the customer country. Planning for transfer, and preparation of the ship for transfer must begin before final authorization for the transfer is obtained. Consequently, some actions are required before the transfer is actually directed. This section describes the basic transfer process necessary to successfully complete the turnover of a U.S. Navy ship to customer navy. Figure 12 depicts a flow chart for the ship transfer process and the Appendix at the end of this thesis

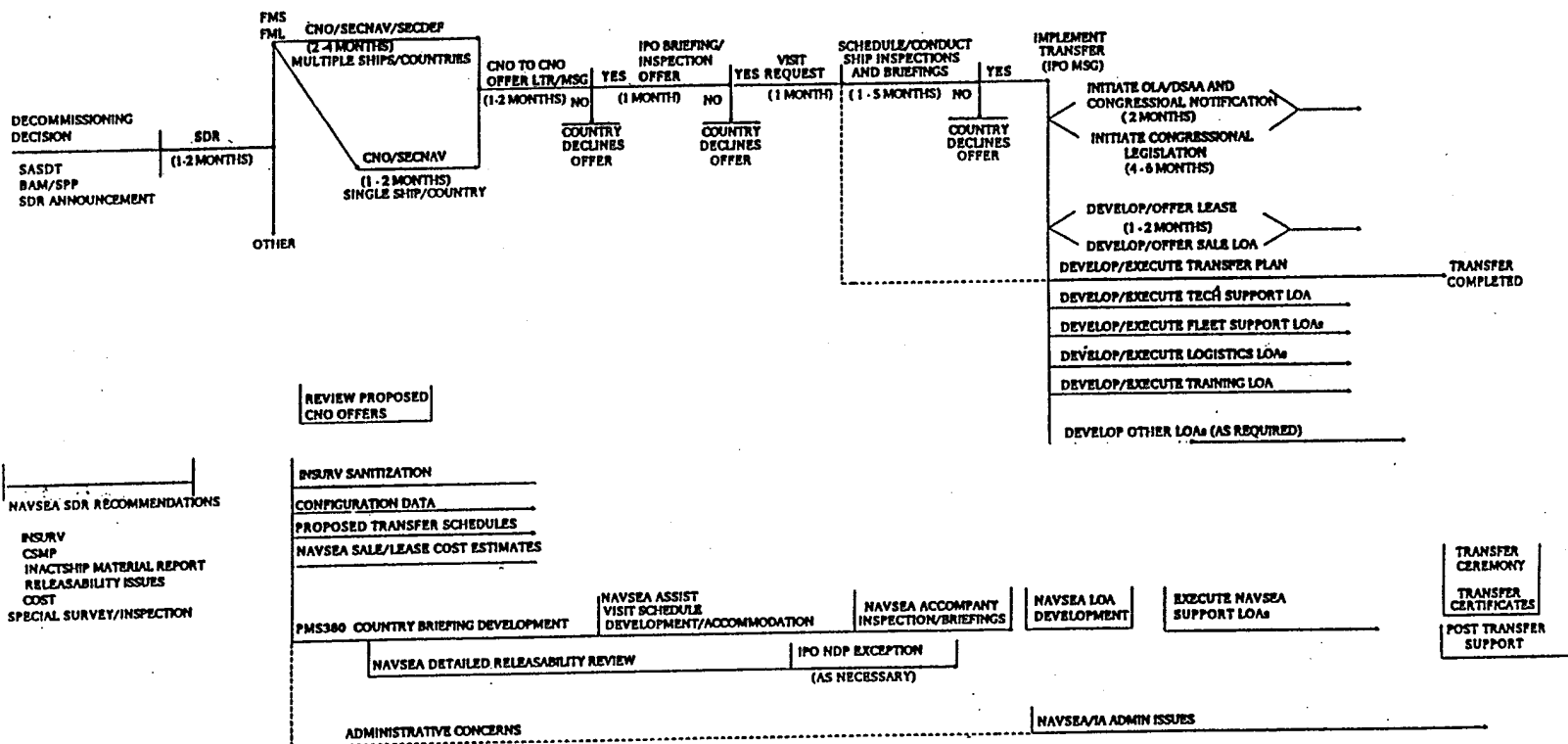


Source: The Ship Transfer Guide, NAVSEASYS.COM, 1993.

Figure 11. "Cold Ship" Transfer with a Full Reactivation

Source: The Ship Transfer Guide, NAVSEASYS COM, 1993.

Figure 12. Transfer Process



provides a detailed information for each step shown on the flow chart.

1. The Planning Phase

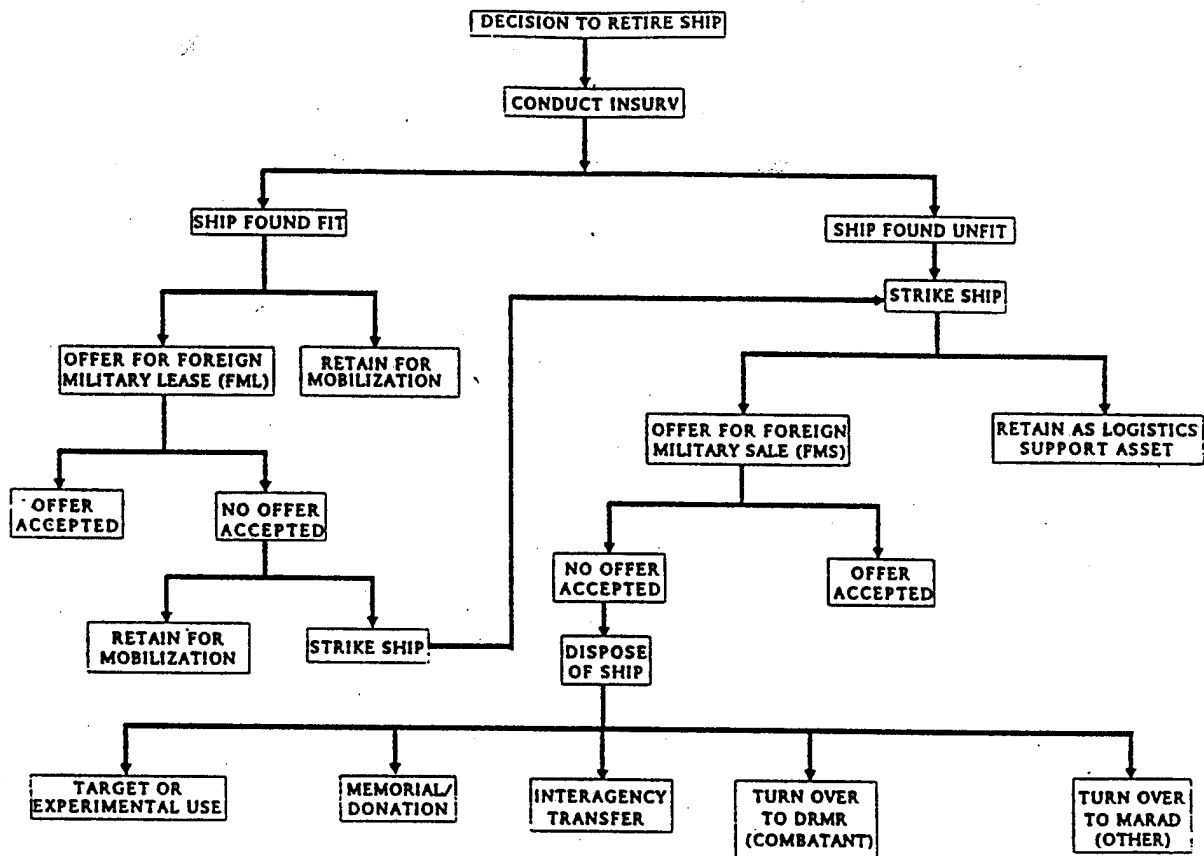
Prior to a vessel being offered for transfer certain decisions and administrative prerequisites must be met. The ship availability studies, the ship disposition reviews (SDR), the board of Inspection and Survey (INSURV) inspections and CNO certifications are required, time consuming events needed to permit the transfer process to proceed. The ship decision matrix in Figure 13 outlines these decision sequences and Appendix provides detailed information pertaining to these actions.

2. The Ship Offer Phase

The process leading to the offer of ships for sale or lease to foreign countries begins with a collection of requests, normally over a period of years, from the foreign governments. After the SDR is approved by the CNO making the ships available for foreign transfer, and the proper navy certification/authorizations are received, the Navy IPO and OPNAV initiate the process to offer ships to specific countries. This leads to CNO formal invitations to customer navies to undertake the ship transfers.

The foreign navy requests can be in the form of formal written documents to any level in the U.S. Government or informal verbal exchanges that filter down to the Navy IPO when a U.S. dignitary returns from a formal visit.

Upon approval by SECDEF to extend offers, OPNAV in coordination with the Navy IPO will draft a letter to the



Source: The Ship Transfer Guide, NAVSEASYS COM, 1993.

Figure 13. Ship Disposition Decision Matrix

foreign country CNO (or equivalent). The letter will be signed by CNO and forwarded through security assistance channels to ensure the U.S. Ambassador and Defense Attache are in concurrence. This offer to undertake the ship offer includes several points:

- Identifies the specific ships offered.
- States the transfer is subject to congressional approval.
- States Navy IPO will contact their government representative to provide background information, set up a ship inspection visit, host a conference to discuss transfer details and discuss costs.

After the CNO offers are forwarded to the foreign government, the Navy IPO works with NAVSEASYSOM, INACTSHIPSOM, NAVSUPSYSOM, NETSAFA, and appropriate systems command organizations to develop a schedule that will allow inspections of ships and follow up formal technical briefings in an orderly fashion over the next 6-8 months.

The ship visit information is sent to the foreign office considered most appropriate by Navy IPO to facilitate the process, with copies to other key organizations. Although at any time in the process the foreign government may withdraw their request for a ship or decline the CNO offer, this is the first time they are faced with spending money on the project. Therefore many foreign governments decline the transfer offer or request a delay in the proposal visit/briefing at this point. Figure 14 outlines the offer process defined above.

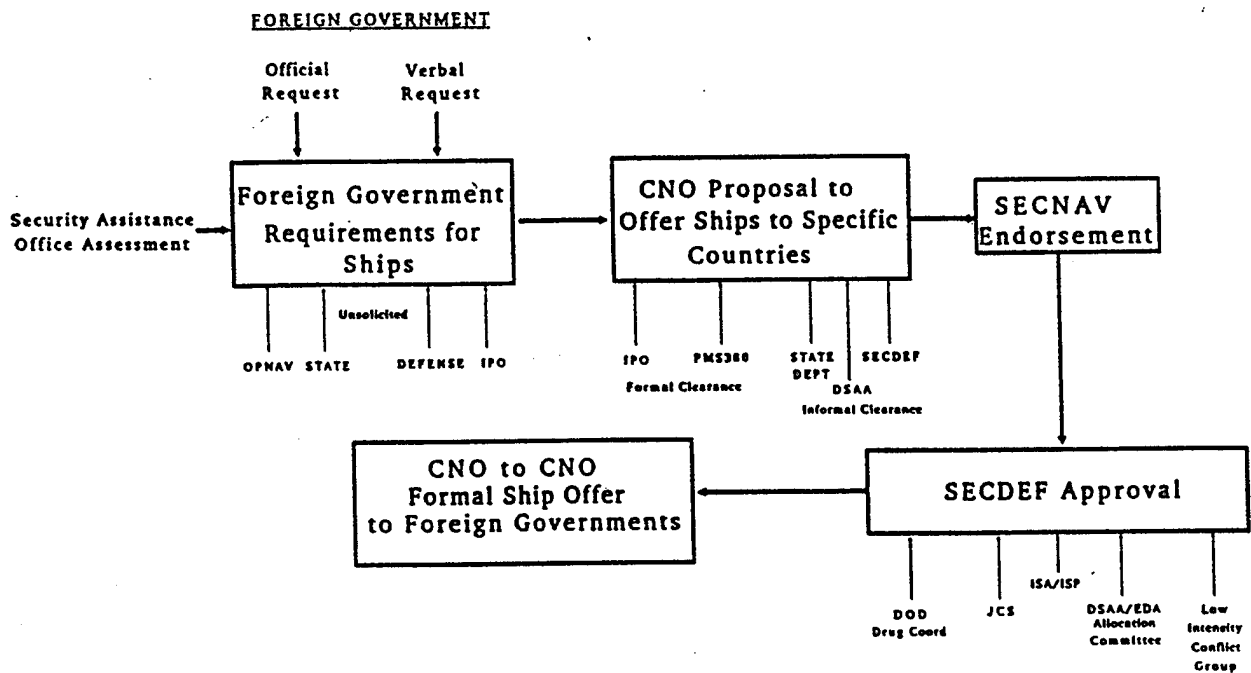


Figure 14. Offer Process

3. Ship Inspections and Formal Briefings Phase

A physical inspection of each ship offered for transfer is required so that the foreign government representatives can assess the physical condition of the vessels. It also serves to introduce the custodial activity to the foreign Navy and the FMS/FML transfer process. The inspections are normally held at fleet locations, Navy Inactive Ship Maintenance Facilities, or Maritime Administration (MARAD) facilities.

Within a day or two following the ship inspections, formal transfer briefings will be held at the Navy IPO/NAVSEASYSKOM. These briefings will outline in detail the transfer process, a general transfer plan, technical details on the key systems and equipment on the ships, available training and follow-on support. A desirable result of the discussions is to find out what the foreign country desires in terms of training, logistics, and pre/post transfer repairs or upgrades. Information gathered during these exchanges will be important in the development of lease/sale agreements the transfer plan and LOA's used to provide services/support.

The final action in this preliminary step in the transfer process is the most important. The Navy IPO will solicit a formal commitment from the foreign government that they are interested in pursuing the ship transfer. Normally, the country response is in the form of a Letter of Request (LOA). Having seen the ships and been presented with the facts and costs associated with the sale or lease, each foreign government must decide if they have the assets necessary to succeed. Their in-country facilities, number and quantity of personnel, and available budget authority may fall short of

the significant infrastructure required to support additionally ships.

From the U.S. Navy perspective this official assurance is important before initiating the Congressional notification/legislation necessary to authorize the transfer. It is the U.S. Navy policy to avoid the time consuming and politically sensitive step of proposing legislation before Congress if they are not sure the country wants to proceed. Figure 15 outlines the inspections/briefings decision sequences.

4. Congressional Approval and Sale/Lease Development Phase

Upon completion of the above preliminary phases of the ship transfer process the actual implementation of the transfer is set in motion by the Navy IPO. This includes formally assigning an Implementation Agent, initiating the Congressional approval process, and developing many Letter of Acceptances (LOA) to support the transfer.

a. The Implementing Directive

Although the assignment of the Implementing Agency is generally clear prior to the formal ship transfer briefings, the official assignment normally comes after the foreign government confirms their commitment to continue the transfer. The Navy IPO announces the assignment to the many Navy activities involved in the transfer by message, with a general outline of the transfer timetable.

b. Congressional Notification/Legislation

Often, the greatest obstacle in the transfer process is the requirement to obtain Congressional approval of the ship transfer. Title 10, U.S. Code, Article 7307 imposes the

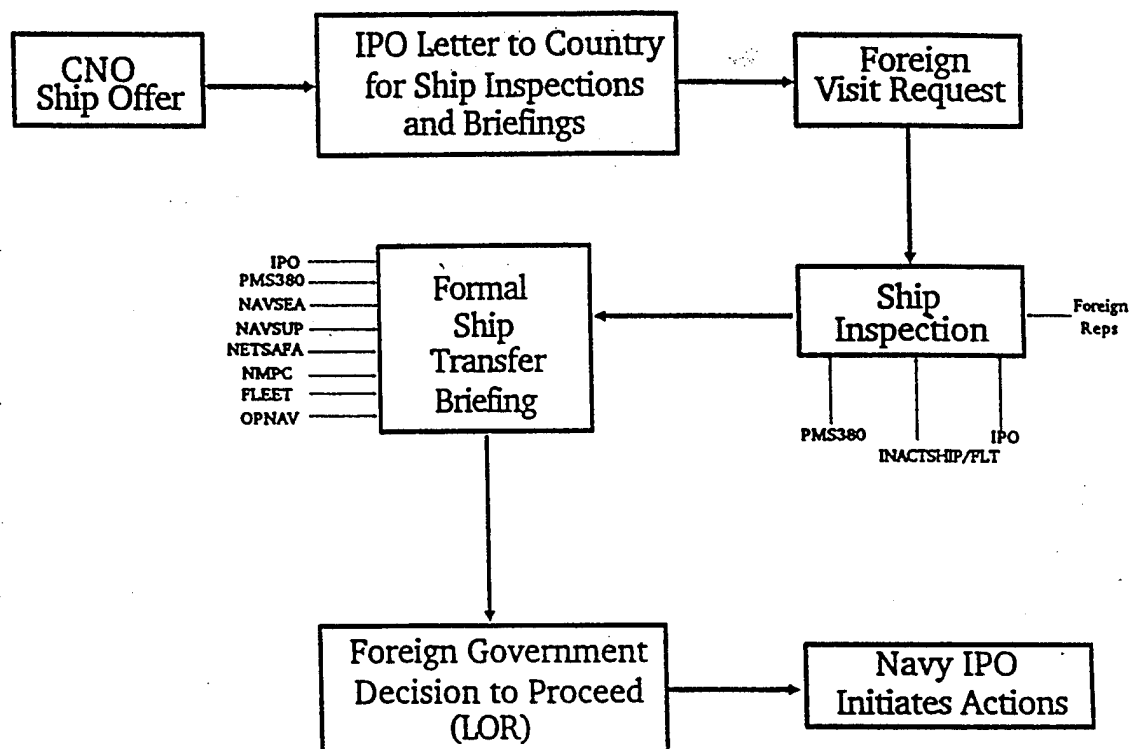


Figure 15. Inspections/Briefings/Decision Sequence

requirements. Figure 16 outlines the provisions of this public law.

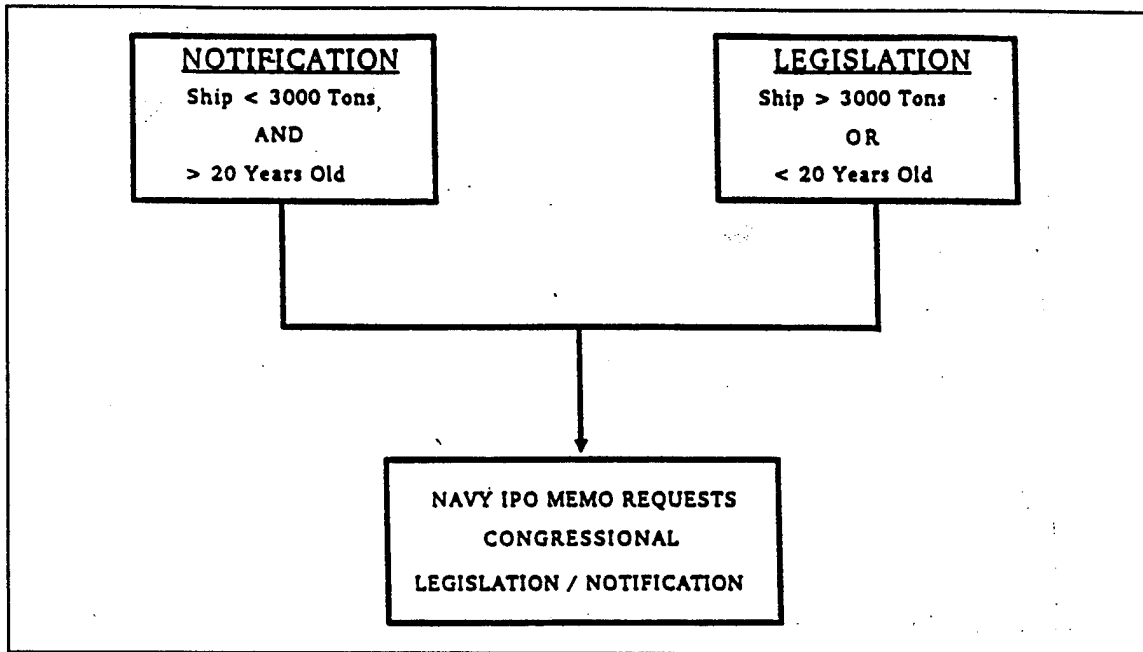


Figure 16. Title 10, U.S. Code, Article 7307

(1) *Article 7307 (b)(1)*. According to this article, a Naval vessel that is in excess of 3000 light tons or less than 20 years of age may not be transferred to another nation, unless approved by law and enacted by Congress. The main disadvantage to this process is that the enacting legislation can take 5-7 months. Figure 17 outlines the Congressional legislation process and the Appendix provides a detailed information inherent to this article.

(2) *Article 7307(b)(2)*. Under this article, a Naval vessel that is less than 3000 light tons and greater than 20 years old may be transferred only after the SECNAV has notified Congress in writing of the proposal transfer and 30

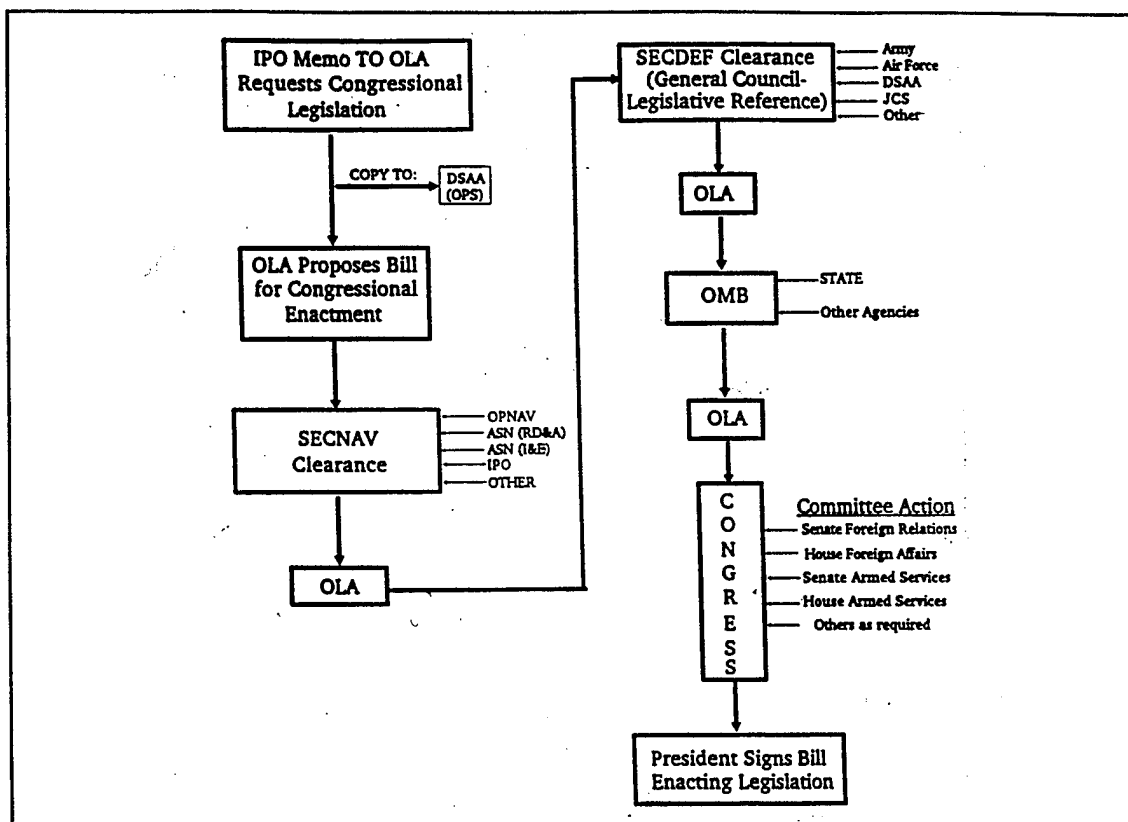


Figure 17. Legislation

days of continuous session of Congress have expired without legislation objecting to the proposed transfers. The notification procedures are normally faster and are much easier to anticipate than the time required to enact legislation. However, the main disadvantage to this process is that the continuity of the 30 days is often difficult to predict and must be watched closely as any recess by either House for more than 3 days can stop the notification period. Figure 18 outlines the congressional notification process and the Appendix provides a detailed information inherent to this article.

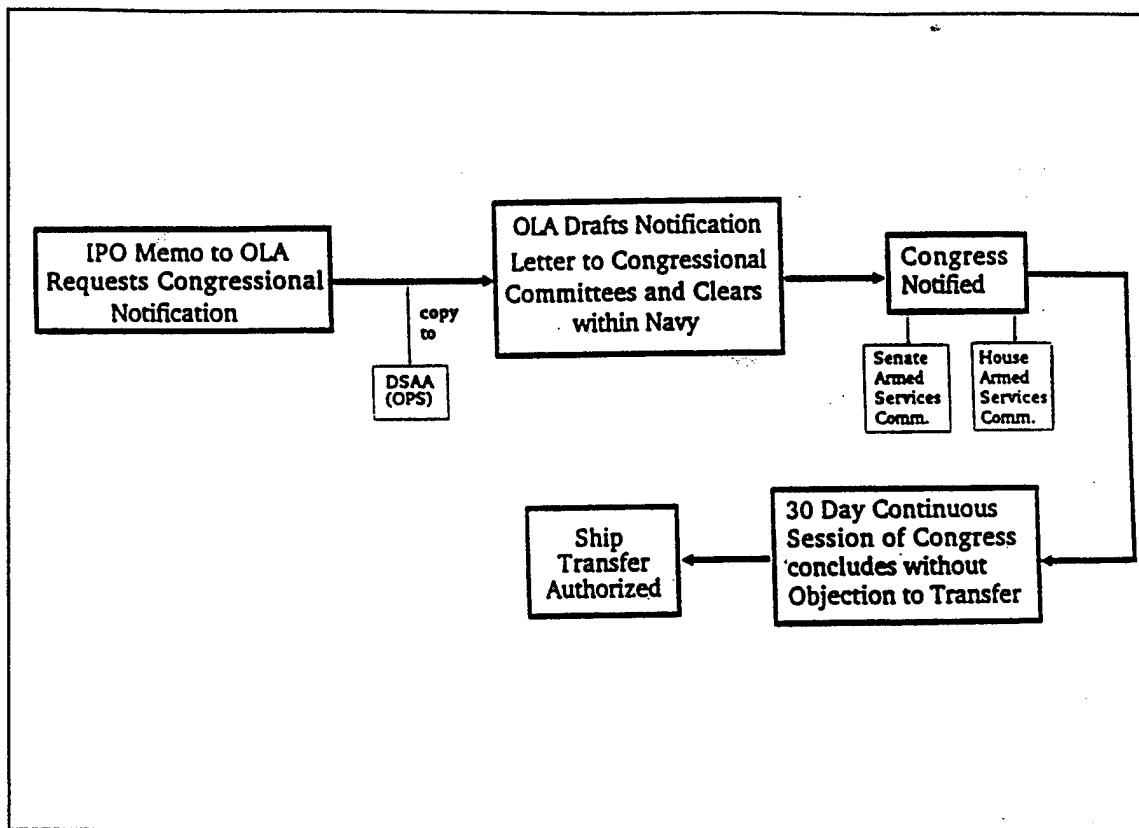


Figure 18. Notification

c. Lease Development

Upon completion of Congressional notification/legislation requirements, the proposed lease and a determination drafted by the Navy IPO are forwarded to Defense Security Assistance Agency (DSAA) for final approval. Subsequent to DSAA approval, the actual lease agreement is signed by the appropriate representatives of both countries.

d. Sale LOA Development

An Letter of Offer and Acceptance (LOA) is used for FMS cases to execute the sale. If the LOA is acceptable to the purchaser, they have sixty days to complete, sign, and

forward it with any required initial payment. The LOA becomes a contract when it is accepted and signed by a representative of the purchasing nation.

e. Support Case LOA Development

The types and numbers of cases required to support both FMS and FML transfers vary, depending on the method of transfer described before. Generally, as a result of the formal briefings and negotiations, five different types of support FMS cases can be developed, offered and accepted by the foreign government as part of the transfer. These types of support FMS cases include:

- Technical support cases: Technical Documentation Support.
- Training Cases: Formal Schools, Team Training, Mobile Training Team (MTT), Fleet Introduction Team (FIT) and Tailored Ship Training Assistance (TSTA).
- Supply cases: COSAL/COSMAL design, repairs, direct requisitioning.
- Fleet cases: Voyage repairs, Berthing/Messing support.
- Major Availability Cases: Availability of major components for replacement and repair.

5. Transfer and Subsequent Support Phase

Subsequent to establishment of transfer method through a bilateral agreement between the countries, the actual transfer of the ships are executed according to the general provisions defined below:

a. Delivery Preparations

The major steps will be the removals of classified equipments, establishment of ammunition off-load and/or on-load requirements, stores loading for the recipient country, provisioning of the ship, preparation for decommissioning/transfer ceremony, and the repair work that is identified in the transfer plan or LOA which has been funded by the foreign government. The Appendix provides a detailed information on these steps.

b. Foreign Crew Support

The Implementation Agency is responsible for arranging the support for the foreign crew members upon their arrival at the transfer site. This entails arranging for messing, berthing, transportation, and training coordination, providing office space and general support during the transfer.

c. Training Support

Training is handled under a separate FMS case from the ship transfer. Prior to ship transfer, a ship transfer training plan is developed by NETSAFA. The Implementing Agency (IA) is the training coordinator for the foreign crew. As such the IA will arrange for and establish liaison with appropriate training commands on behalf of the foreign crew. Training under the IMET Program, regardless of the method of transfer or the legal authority, is paid for by FMS credits. Specific issues associated with training are discussed in the Appendix.

d. Decommissioning and Transfer Ceremony

The transfer ceremony is normally held concurrent with the U.S. Navy decommissioning of the ship. The transfer ceremony is required in the case of a "Hot Ship" transfer, and may be conducted for other transfers, if it is requested by the foreign country. The foreign country takes possession of the ship at the conclusion of the U.S. Navy decommissioning ceremony.

e. Transfer Documentation

A certificate of delivery is provided by the Navy IPO for execution by the officer authorized to turn over the ship to the recipient navy. The certification is signed in duplicate, by the Implementing Agency and the representative of the foreign government during the transfer ceremony.

f. Status of Ship

The U.S. Navy maintains the legal responsibility until the ship is decommissioned and both parties have signed either the Lease Agreement or Sale LOA and the Delivery Certificates. After a "Hot Ship" transfer, the ship proceeds under the flag and command of the foreign navy commanding officer as a commissioned ship of the recipient navy. If the ship is transferred from an inactive status, it becomes the legal responsibility of the recipient government after delivery.

g. Homebound Logistics and Communications Support

Logistics and communications support for the homebound voyage is authorized in SECNAVINST 4900.48. Such support is provided under FMS and is priced in accordance with the FMS Financial Management Manual (DOD 7290.3M). Spare

parts and consumables needed can be requisitioned through the U.S. Navy supply system by the foreign crew on a "fill or kill" basis on cost-reimbursable basis after transfer. However, this is not authorization for routine replenishment of spares by the foreign country. Routine replenishment, whether for a short or long periods, based on the desires of the foreign country is purchased under a separate FMS spares replenishment case.

j. Ship's Departure

After completion of the transfer ceremony and signing of the delivery certificates, the recipient may take the ships to its homeport at the time decided by the country.

D. FOLLOW-ON SUPPORT

Follow-on support consists of a wide range of available services. Although normally focused on repair parts, it can also include industrial, technical, training, and documentation services. United States Navy support can usually be provided, if it is separately requested and funded by the foreign country. The Appendix provides an in-depth discussion of follow-on support issues.

IV. CASE ANALYSIS: TURKISH KNOX CLASS FRIGATE TRANSFER PROGRAM

A. TURKISH NAVY MODERNIZATION PROGRAM

Turkey has been a key ally of the United States for decades, and is one of the most strategically important countries in the world. Its strategic importance lies in the ability to guard the southeaster flank of the North Atlantic Treaty Organization (NATO) and the critical passage from the Black Sea into the Mediterranean. During any hostility, unfriendly forces would have to pass through this critical passage to reach the Turkish Straits. Consequently, if attacked by former Warsaw Pact nations, Turkey could find itself facing a land war on two fronts and a naval obligation to block the Turkish Straits. Thus, Turkey alone has the responsibility of defending potentially one-third of NATO's front. This is an enormous task, especially given the fact that this country is one of the poorest members of NATO, and is one that uses outmoded weaponry. [Ref. 21:p. 974]

Beginning in 1985, Turkey has sought to improve its defensive posture by developing a fifteen-year Strategic Defense Modernization Plan that included the improvement of its navy. From the Turkish Navy perspective, this plan led to the construction of new frigates, submarines, and the acquisition of eight ex-Knox class frigates obtained through lease from the United States. All of these modernization activities have virtually remade the Turkish Navy into a modern force, capable of extended operations in support of national and NATO missions.

B. KNOX CLASS SHIP TRANSFER PROGRAM

1. Background

In the early 1990s, the Turkish Naval Fleet was mainly comprised of World War II (WWII) vintage destroyers. As these former U.S. ex-Gearing and ex-Carpenter class destroyers aged and their maintenance costs grew, the Turkish Navy began looking for replacements. Initially, Perry class frigates from the U.S. Navy were preferred because of their modern combat systems and gas turbine power plants. However, since these ships were not yet available for FMS/FML in late 1992, Turkey asked for eight excess Knox class frigates from the U.S. and committed \$300 million for their lease and outfitting costs.

The FF-1052 Knox Class Frigate is one of the three Fast Frigates (FF) class of ships in the U.S. Navy. These ships have primarily an anti-submarine warfare (ASW) mission by design and all contain the AN SQS-26 active search and attack sonar, Anti-Submarine rocket (ASROC) launcher and torpedo tubes. In addition to these ASW weapons and systems, these ships were modified in early 1980s to accommodate one Light Airborne Multi-Purpose System (LAMPS) SH-2 ASW helicopter. The FF-1052 class frigates have a fairly limited anti-air warfare (AAW) capability with each ship having only one 5"/54 gun forward. However, with the latest modifications, this limitation was minimized by the accommodation of HARPOON guided-missiles and PHALANX close-in weapon systems (CIWS). The length of the ship is 438 feet long. It cruises at a maximum speed of 28 knots, displaces 4260 tons, has a single

propeller shaft and operates with a 1200 lb. steam engine [Ref. 22:p. 708].

The Knox class of ships comprises the largest group of Frigate type warships built to the same design in the U.S. since WWII. These ships require extensive periodic overhauls, mainly resulting from the maintenance requirements of 1200 lbs. steam plants. They came equipped with the Tactical Data System (TDS), that is designed to bring a more accurate, rapid, and complete exchange of tactical data and command/control information for the ships in its ASW mission.

2. History of the Transfer

a. Negotiation Phase

Negotiations to obtain the Knox class ships by Turkey began with correspondence between Turkey and the U.S. Government. In late 1992, the Turkish Defense Minister expressed Turkey's interest in obtaining Knox class frigates from the United States. As a result of this expressed interest, the U.S. Chief of Naval Operations (CNO) sent a letter to the Commander of the Turkish Naval Forces. This letter stated that he had recommended to the U.S. Secretary of the Navy for the transfer of eight Knox class frigates [Ref. 23:p. 1]. Subsequent to this initial dialog, a Letter of Offer was sent to the Commander of the Turkish Naval Forces by the Navy International Program Office. This letter delineated the dates for possible inspections of the ships and stipulated that further briefings and negotiations were necessary to complete an agreement between the two countries.

Subsequent to the Letter of Offer, the Turkish Navy representatives inspected the ships and conducted ship

transfer meetings with the Navy IPO, Naval Sea Systems Command (NAVSEA) and designated Transfer Implementing Agency officials. An agreement was reached between the parties at the conclusion of these meetings for the lease (FML) of eight ships and the grant of one ship under FMS.

b. Congressional Approval

Following the agreement between two navies, Congressional approval to transfer these ships was obtained by the Navy IPO working in concert with Defense Security Assistance Agency (DSAA). Public Law 103-54 dated July 28, 1993 authorized the lease of the following ships to Turkey: USS Reasoner (FF-1063), USS Fanning (FF-1076), USS Thomas C. Hart (FF-1092), and USS Capodanno (FF-1093). The lease period for the ships was five years, authorized under Chapter 6 of the Arms Export Control Act (22 U.S.C. 2796). The same public law also authorized an FMS grant of USS Elmer Montgomery (FF-1082) under the provisions of the Foreign Assistance Act of 1961 (22 U.S.C. 2321), relating to transfers of excess defense articles. The ship was granted as a spare parts/logistics resource vessel. Public Law 103-174 dated December 2, 1993 authorized the lease of another four ships to Turkey. These ships were the Knox class frigates USS Bowen (FF-1079), USS McCandless (FF-1084), USS Donald B. Beary (FF-1085), and USS Ainsworth (FF-1090). These ships were also leased to Turkey for five years.

c. Implementation of Transfer

The FML of Knox class ships was drafted in accordance with DOD 5105.38, SECNAVINST 4900.48, and occurred as cost-reimbursement contracts between Turkey and the U.S.

Government. The lease period was for five years, the conclusion of which Congress could authorize a renewal or confiscate the ships. The leases were eight page documents that consisted of two pages for the signed contract with another six pages for general provisions, clauses, and payment schedules. The basic lease document stipulated an agreement between the two countries on the following issues: rental charge of the ships, lease period of five years, delivery of the ships from the ports of Norfolk and San Diego, and Certificate of Delivery confirming transfer of ships to Turkey. The six-page attachments of general provisions included agreements on the following issues: renewal terms of the lease, risk of loss, ship operations and use, initial condition of the ship, transfer costs, indemnification, inspections, maintenance, alterations, termination of lease, place of redelivery, ship title, proprietary rights, and reports of the ship condition.

One clause inherent in the lease specified that all eight ships would immediately transfer in a "Hot Ship" (active) status. As stated previously, a "Hot Ship" transfer is the least expensive transfer method for a foreign government, since the ship is in an active operational status. As part of the "Hot Ship" process, the leased ships were manned by the U.S. Navy personnel until the decommissioning/transfer ceremony officiated the transfer of the ships from the U.S. Navy to the Turkish Navy.

As part of the "Hot Ship" transfer process, 13 FMS cases were established, covering all aspects of the transfer including training, supply support, weapons, post-transfer

repairwork, and Turkish shipyard improvements. Subsequent to completion of all legal authorizations, actual transfer of the ships were conducted in two batches, comprised of four ships in each batch. Transfers occurred in accordance with the current U.S. Ship Transfer Program directives that are explained in the previous chapter. The first four ships were commissioned into the Turkish Navy in November 1993, and the second batch of four in July 1994. Since their turnover, the ships have operated safely and reliably, and significantly increased the capabilities of the Turkish Navy.

Although the overall ship transfer processes were conducted successfully, there were several problematic issues. These problems jeopardized the effective implementation of the FMS/FML ship procurement process. The following sections identify and discuss the major transfer problems inherent in the Turkish Knox class frigate procurement and the lessons learned from the process.

C. ANALYSIS OF TRANSFER PROBLEMS

1. Training

A major problematic area associated with either a "Hot Ship" or "Cold Ship" transfer includes the type of training necessary for the recipient navy to assume safe control of the vessels. Both formalized "schoolhouse" and informal "on-the-job" training are critical elements of the transfer, and potential sources of issues needing resolution. For example, during the conduct of the "Hot Ship" transfers between the U.S. and Turkey, Turkish crews were given both formal and informal training sessions. Several systems endemic to the Knox class frigates required that individuals be graduates of

formal courses before the new crew member could adequately operate the equipment. This was particularly true of the steam system, the weapons and the sonar. But, some of the formalized training consisted of courses more than one year in length. Training for the steam system of Knox class ships, for example, was over one year in length. It was necessary for Turkish sailors to receive this training, since the steam systems were 1200 lbs. (psi), versus Turkey's previous experience with only 600 lbs. (psi) steam engines. Because of this new type of engine, all engineer personnel needed extensive steam engine training. But, it was not always possible for the sailors to receive this training, due to other circumstances.

One such circumstance concerns political factors that impacted on the training decisions. In order to ensure a "safe-to-sail" and "combat-ready" shipboard environment, 72 personnel/ship were planned to receive advanced skill training prior to reporting to the ships. Additionally, another 150 personnel per ship were planned to receive team and short term training during ship introduction exercises. However, due to the high interest in the program, there were policy decisions to accelerate decommissioning/transfer of the ships. The implementation schedule of the training was significantly impacted. As a result, to fit the training program to accelerated transfer timelines, some of the Turkish Navy personnel had to report to their ships before the completion of their formal school training. Also, some of the high risk training involving damage control and fire fighting had to be canceled. These examples highlighted the adverse effects of

political interest and unanticipated schedule changes on the effective implementation of the training program, and also revealed some of the many training issues that must be resolved for successful ship transfer. [Ref. 24:p. 3]

In addition to training problems discussed above was the closure of U.S. naval training facilities that were providing extensive training for the foreign crews. The U.S. Navy's ability to execute the transfer of decommissioned ships to foreign navies is being jeopardized by the deactivation of many formal training courses. For example, although the required funds were committed by the Turkish Navy, eight different formal school courses were canceled, as the U.S. Navy retired its last Knox class ships. These courses were necessary for improving the Turkish crew ability to effectively operate the ship systems, but were both canceled due to the closure of U.S. Navy training bases at Orlando and San Diego. [Ref. 25:p. 4] This problematic issue requires U.S. Government action and support for the successful accomplishment of existing and potential future FMS/FML ship transfer programs.

Another problematic area concerned the depth and breath of training received by the Turkish Navy personnel. Current U.S. policies relating to ship transfers stipulate limitations pertaining to training. According to policy guidelines, both formal and informal "on-the-job" training and associated documentation taught to foreign crews are limited only to teaching those elements necessary to allow the safe operation of the ship and weapon systems. However, the detailed explanation on limitations of training is not defined and is

left open to the discretion of the implementing agencies. Thus, Turkish Navy personnel neither received in-depth instruction on weapons system employment, nor on sonar systems acoustic analysis and signal recognition. Most of the training was limited to only basic operation and maintenance of the ships. This limitation on in-depth weapon systems training posed a frustration between the two countries during the implementation of the training program. It is believed that these problems were primarily caused by two factors: the unclear U.S. policy guidelines pertaining to the transfer of ships, and by the limited experience with regard to "Hot Ships" transfers of both the U.S. Navy Transfer Implementing Agency and the Turkish Navy.

Another transfer problem related to training resulted from the doctrinal differences between the two navies. Turkish Navy is structured upon European naval philosophy of "Specialization" versus the U.S. Navy philosophy of "Generalization" of surface line officers. This doctrinal difference affected conduct of shipboard engineering training. For example, the U.S. Navy expects the bridge/CIC officers to have a basic understanding of engineering plant operations and how a particular engineering casualty will impact the ship's combat posture [Ref. 25:p. 2]. Turkish line officers, however, are specialized and only have knowledge in their field of duty. In order to minimize this difference in training, it is crucial that the U.S. Navy non-engineering officers conduct cross cultural "on-the-job" training with their recipient navy counterparts.

During the implementation of the training programs, communication barriers presented another problem. The limited number of interpreters at waterfront schools (e.g., general fire fighting) was a barrier to learning. Since "Hot Ship" transfers required Turkish Navy personnel to work along side their U.S. counterparts, more interpreters were required than were provided. Thus, communication barriers were a hindrance to effective transfer of information. In order to minimize this problem, two things are important: first, the U.S. Navy should provide a sufficient number of contracted interpreters to waterfront schools; second, the recipient navy should improve the English comprehension level of personnel selected to participate in training program before their arrival in the United States.

2. Technical

One of the transfer problems was caused by the lack of technical information provided for the effective operation of sonar systems. Since Turkish Navy had no prior experience with the operation of AN SQS-26 sonar, technical information pertaining to the system was officially requested by the Turkish Navy representatives during the technical meetings. This information included technical characteristics and capabilities of the sonar system, such as receiving sensitivity and noise level detection. However, this request was not approved, because current U.S. Navy ship transfer policies prohibits release of confidential classified information. According to SECNAVINST 4900.48, technical information on acoustic analysis and signal recognition is

identified as confidential information and cannot be disseminated.

Currently, the Turkish Naval shipyards lack experience with these sonar systems; and they lack the specialized testing equipment needed to conduct the necessary testing to obtain information on the systems capabilities. But the U.S. has both. Additionally, the U.S. Navy has previous test and evaluation data on the equipment that could provide valuable insight into the operational capabilities of the system. However, current policies prohibit the USG from providing this data to the recipient country. Consequently, this information is discarded with the elimination of Knox Class Frigates from the U.S. ship inventory. As a result, the Turkish Navy is currently experiencing technical problems with respect to effective employment of AN SQS-26 sonar systems.

Another technical problem was in the area of coordinating the communications support for the Turkish Navy ships. Normally, communications support for transferred ships following sail away for home is addressed during technical briefings. However, in the case of the first batch of four ships, the issue was not addressed or coordinated during these briefings. Consequently, two of these ships communicative abilities encountered interference, and thus were unable to send message traffic.

3. Logistics

Unanticipated changes to original transfer timelines may sometimes severely effect logistics planning. During the implementation of the transfer program, the TN Headquarters made a unilateral change in the sail away dates for the TCG

ADATEPE and TCG KOCATEPE. This change caused both of the ships to sail back to Turkey earlier than U.S. logistics planning had anticipated. Consequently, this change severely effected logistic planning of the U.S. officials, since NAVSEA and Fleet Industrial Support Center (RISC) based much of their actions on the original dates. As a result, TCG KOCATEPE (Ex-USS Reasoner) carried supply parts/material to Turkey for TCG ADATEPE (Ex - USS Fanning) and items for TCG KOCATEPE (Ex - USS Reasoner) were shipped by other means, with an additional cost to Turkey. [Ref. 26] Thus, unilateral, unplanned changes in the transfer timelines made a significant negative impact on the transfer process.

Another logistics problem concerned the differences in the levels of the Coordinated Ship Allowance Lists (COSAL) of the ships transferred from Norfolk and San Diego Naval Bases. Coordinated Ship Allowance Lists are comprised of various quantities of ship repair parts, consumables and logistical sustainment packages. In the Turkish ship transfer case, those ships transferred from Norfolk, as compared to San Diego, had a higher level of COSAL equipment. In the existing system, since the current ship transfer documents are not explicitly defined, with regard to COSAL levels and ship types, the levels vary from ship to ship. Because of these differences in the COSAL levels, Turkey incurred additional costs. [Ref. 27]

The other important transfer problem associated with logistics was caused by the quality of ammunition supplied with the transferred ships. Currently, in the U.S. Navy Ammunition Supply System, munitions are classified as A, B, C,

D, or E according to their production date and the results of periodic tests. Although classes A, B, and C are mainly qualified as usable, the best results are obtained from class A ammunition. In the Turkish ship transfer case, the quality of ammunition that was to be supplied with the ships was not explicitly stated in the original lease agreement. Thus, during the ammunition on-load of the ships, issues resulting from the quality of ammunition created problems and frustration between Turkish and U.S. officials.

4. Management and Accounting of FMS Funds

Another major transfer problem is the management of FMS funds. According to the current Security Assistance System, information concerning the usable level of FMS funds is under the total control of U.S. officials. Thus, after an FMS case is established, the recipient country must rely on the information provided by the U.S. officials to track the expenditure of their funds. However, any problem resulting from the mismanagement of the U.S. accounting system may adversely impact on the implementation of the ship transfers. For example, during the post-transfer sonar system repair work of TCG ZAFER, the repair activities were temporarily stopped by the U.S. Intermediate Maintenance Availability (IMAV) activity for 15 days. The reason for stoppage, as announced by the maintenance activity officials, was due to the unavailability of funds in the established FMS case accounts. However, at the end of 15 days, it was revealed that money was available. The actual problem was inaccurate accounting by the U.S. Navy, and the repair work then resumed. However, due to this unexpected delay, and the existing transfer timeline

constraints, some parts of the system could not be repaired. Allowing the recipient navy officials to participate in monitoring of FMS accounting systems could have been effective in the minimization of future problems.

5. Long-Term Technical/Logistics Supportability

A major source of problems associated with the transfer of Knox Class Frigates to Turkey includes the long-term technical/logistics supportability of the ships. In light of military downsizing and the subsequent reduction of U.S. Naval forces, Knox class ships were scheduled for decommissioning and transfer to security assistance customers beginning in 1993. Due to the elimination of these ships from the active U.S. Navy inventory, equipment and support facilities unique to these vessels were also discontinued from operational use. Examples of discontinued equipment and corresponding support facilities include: in-service engineering activities, depots supporting ASW and Gun/Fire Control equipment, and spare parts unique to the Knox Class Frigates. Moreover, these were eliminated before customers had an opportunity to identify their requirements. [Ref. 28:p. 2] Thus, the current downsizing of the U.S. defense industrial complex is of great concern to Turkey, and the other ten countries that have already procured these ships. Obviously, this trend may have tremendous adverse effects on the long-term supportability of the ships. Future sustainment concerning the operational availability of these ships by the customer countries mainly requires technical assistance and spares requisitioning provided by the United States. In 1994, an FMS contract was signed between the U.S. and Turkey for the provision of

follow-on technical/logistics support for ships including material support, technical assistance and program management support. However, in light of current U.S. military downsizing and the resulting uncertainty in the future capability of the U.S. defense industrial base, Turkey anticipates future supportability problems, since some contractual aspects may not be performable in the future. [Ref. 29:p. 3]

D. LESSONS LEARNED

This section assists in answering the primary thesis question and discusses the important lessons learned from the analysis of the Turkish Knox Class Frigate ship transfer program.

1. FML Benefited Both Turkey and the U.S.

Foreign Military Leases afforded Turkey the opportunity to obtain a class of ships that otherwise would not have been available to them. Since eight of the nine Knox class ships did not meet the FMS criteria, a lease was the only possible means of obtaining the ships. Further, the cost of leasing as opposed to buying was less expensive. Leasing eight operational U.S. Knox class frigates, including all transfer related activities and ammunition cost only \$213 million. On the other hand, buying one ship, including the ammunition, through FMS would have cost approximately \$450 million. Consequently, the FML allows Turkey to replace its WW II vintage ships with modern frigates cheaply and quickly. Additionally, the U.S. benefited by keeping a ship operational that ultimately could be recalled.

2. "Hot Ship" is the Most Beneficial Transfer Method

The Hot ship method of transfer was beneficial to both the Turkey and the United States. Turkey was afforded eight operational ships and did not have to finance reactivation and reoutfitting costs. Using the "Hot Ship" method of transfer saved Turkey approximately \$80 million. Additionally, on-the-job training provided an extensive opportunity for Turkish Navy crew to interact with their U.S. Navy counterparts, who had experience with ship operations. The U.S. Navy also benefited from Hot Ship transfer methods because deactivation activities and associated costs were nonexistent. This saved the U.S. from financing deactivation activities that would have included: stripping of the ship's equipment, sanitization of all documentation and materials, decommissioning and storage.

3. The Scheduling of Schools Must Be Improved

For example, in the Turkish Knox class ship transfer case, general fire fighting quotas were not arranged until after the arrival of Turkish Navy crews. Further, automatic boiler control technician schooling conflicted with shipboard on-the-job training (OJT). These problems were temporarily absorbed by reschedule/cancel of U.S. Navy general fire fighting quotas and scheduling of shipboard automatic boiler control training on evenings and weekends. If the Turkish Navy automatic boiler control technicians had been in schools out-of-area, vital shipboard on-the-job training would have been lost. Thus, the scheduling of schools is of critical importance and must be improved.

4. Exogenous Factors Can Influence the Implementation of the Training Program

Political interest on the program, unilateral transfer schedule accelerations, and the limited experience of both the implementing agency and the customer country officials on the "Hot Ship" transfer procedures, are the main factors affecting administration of ship transfer programs. Generally, adverse effects of these factors are reflected as extended negotiations and frustration between parties.

5. Future Training Support is Affected by Downsizing

Closure of the U.S. Navy training facilities that were providing extensive training of the customer countries are seriously hampering the U.S. Navy's ability to sustain the FMS/FML ship transfer programs.

6. Ambiguous Policies are Limiting the Depth and Breath of Training

Current U.S. Naval policies are unclear in their guidance pertaining to the level of information provided to the recipient country. Guidelines specify that training is limited to only those elements that allow for the safe operation of the ship and weapons systems. However, this guidance does not clearly delineate the depth and breath that this instruction can cover. Training details are at the discretion of the implementing agencies. Consequently, this problem, coupled with the inexperience in implementing hot ship transfers, creates an even worse problem.

7. Doctrinal Differences Can Effect the Conduct of Training

Differences in doctrine must be taken into consideration when planning ship familiarization training for the recipient

country. Because the U.S. and Turkey did not share the same doctrinal philosophies, ship board engineering training was severely hampered.

8. Communication Barriers Limits Learning from Training

The number of interpreters, and the English comprehension level of the foreign crew are important factors that should be taken into consideration during the "Hot Ship" transfers. Since "Hot Ship" transfers require foreign crew interaction with their U.S. Navy counterparts, the level of English understood, and the number of available interpreters can effect the transfer of information.

9. Current U.S. Policies Do Not Reflect the Effects of Downsizing

The current U.S. ship transfer policies and regulations are limiting the recipient Navy's ability to obtain critical technical data and information pertaining to the effective operation of ship systems. However, since most of the recipient navies have no other sources to obtain this vital information, they are still relying on the United States. On the other hand, in light of the downsizing of the U.S. military, equipment needed to provide long-term support is discarded before the recipient navies have the opportunity to identify their needs.

10. Technical Briefings Should Include Communication Issues

Technical briefings should be the negotiation forums where all parameters inherent to the transfer are discussed. One important parameter includes the communications support for the transferred ships. If these important issues are not

addressed during these meetings, adverse conditions may occur as it did in the Turkish case.

11. Unilateral Changes to the Transfer Timeline Negatively Affects Logistics Planning

Unilateral changes to the transfer timeline have a major effect on logistics planning. If the recipient country changes the transfer timelines, the U.S. logistics system cannot respond quickly. Thus, before implementing changes to the schedule, the recipient country should take into consideration the potential additional costs resulting from these schedule changes.

12. Level of COSAL Equipment May Vary from Ship to Ship

The current ship transfer documents are not explicitly defined with regard to level of COSAL equipment. Thus, in the absence of standards, recipient countries may have to incur additional costs, to bring the COSAL levels up to required quantities.

13. Class and Quality of Ammunition Transferred Should be Stated in the Lease Agreement

Provision of ammunition issues should be clearly addressed during the transfer meetings and should be explicitly stated in the lease agreement. The absence of clear statements regarding munitions issues, can result in the provision of a lower quality ammunition as occurred in the Knox Class FML case.

14. Tracking of Funds is a Major Hurdle for the Recipient Country

Exclusive control of FMS funds by the U.S. can cause adverse problems in the successful fulfillment of the FMS agreement. As it was experienced in the Turkish case,

inaccurate reporting of funds in the accounting system caused the incompleteness of repair work. Since the U.S. did not allow external monitoring of their accounting systems, the recipient country could not ascertain their financial status with respect to the repair work.

15. Follow-on Technical/Logistics Support Is Waning

In light of U.S. military downsizing and the resulting uncertainty in the future capability of the U.S. defense industrial base it is becoming harder to answer the future spare parts requisition and technical assistance needs of the customer countries. Certainly, this situation may impact the future operational capabilities of the transferred FMS/FML ships.

16. On-the-Job Training Period Is Too Short

The existing ship transfer program guidelines requires a total of 10 weeks on-the-job training period for "Hot Ship" transfers. However, as it was experienced in the Turkish ship transfer case, this amount of time may not be enough to ensure a "safe-to-sail" and "combat-ready" shipboard environment for the foreign crew. The two important hindrances to this process are lengthy administrative delays associated with legislative requirements and potential overhaul work.

17. During Ship Transfer Process Maintain Continuity

During ship transfer transactions, continuity in U.S. Navy personnel is vital to maintaining a smooth turnover of the ships. As was experienced in the Turkish case, as orders came for the U.S. Navy crew members support for Turkish Navy crew members became a problematic issue.

E. SUMMARY

For years, Turkey has been a key ally of the U.S., who has continued to defend the critical southeastern flank of NATO. Since 1985, Turkey has improved its defensive posture by modernizing its military forces through production and acquisition of weapons systems. With respect to Naval improvements, Turkey negotiated with the U.S. to acquire eight Knox Class frigates, committing \$300 million to lease these vessels. The FML for these ships occurred as a cost-reimbursement contract, extending for five years. The ships transferred in a "Hot Ship" active status and Turkey assumed control of these vessels following a decommissioning/commissioning ceremony. Although the ship transfer process was conducted successfully, several problematic issues arose. Analysis revealed that these issues included training, technical concerns, logistics, management and accounting of FMS Funds, and long term technical/logistics supportability concerns. Training problems inherent in the ship transfer process regarded the breath, depth, length and type of formal and informal training necessary for familiarization with the equipment, as well as, the availability of existing and future training facilities. Additional factors impacting on training issues concerned political sensitivity and high interest of the program; U.S. policy limitations on teaching weapon systems employment; Naval doctrinal differences; and communication barriers due to language differences. Technical concerns included: the lack of technical information made available for operation of the shipboard equipment; the lack

of testing data necessary for operational capability assessments; and the lack of communications coordination support for transferred ships. Logistics issues concerned: the adverse impact of unanticipated schedule changes on logistics planning; differences in the levels of COSAL; and quality of ammunition transferred with the ship. Other problematic areas include: the management and accounting of FMS funds, and the recipient countries inability to monitor their accounts; in addition to long-term technical/logistics supportability problems associated with the downsizing of the U.S. defense industrial base.

Analysis of the ship transfer case revealed the following lessons learned:

- FML Benefited Both Turkey and the U.S.
- "Hot Ship" is the Most Beneficial Transfer Method.
- The Scheduling of Schools Must Be Improved.
- Exogenous Factors Can Influence the Implementation of the Training Program.
- Future Training Support is Affected by Downsizing.
- Ambiguous Policies are Limiting the Depth and Breath of Training.
- Doctrinal Differences Can Effect the Conduct of Training.
- Communication Barriers Limits Learning from Training.
- Current U.S. Policies Do Not Reflect the Effects of Downsizing.

- Technical Briefings Should Include Communication Issues.
- Unilateral Changes to Timelines Negatively Affect Logistics Planning.
- Level of COSAL Equipment Varies from Ship to Ship.
- Class and Quality of Ammunition Should be Stated in the Lease Agreement.
- Tracking of Funds is a Major Hurdle for the Recipient Country Follow-on Technical/Logistics Support Is Waning.
- On-the-Job Training Period Is Too Short.
- During Ship Transfer Process Maintain U.S. Navy Personnel Continuity.

V. CONCLUSION

A. GENERAL

In the wake of changing hostile world conditions, the U.S. has sought to continue friendly relationships with all allies through the expedient of its Security Assistance programs. With regard to Turkey, the United States has sought to strengthen its security ties with this strategically important country through the FMS program. In an effort to modernization its navy, and enhance the future sustainability of their fleet, Turkey obtained nine Knox Class Fast Frigates from the United States. The procurement vehicle used for this transfer process included an FMS/FML agreement using the "Hot Ship" method of transfer. The effectiveness of this transfer method was readily evident from the many advantages experienced by both countries.

During the Cold War era, the ship transfer program was implemented efficiently to create a "win/win" situation for trading countries. However, with the end of the Cold War, the U.S. sought to downsize its military. This situation has created problematic issues concerning the effective implementation of FMS/FML ship transfer programs. Analysis of the FMS/FML ship transfer process, with respect to the sale/lease of the nine former U.S. Knox Class Frigates to Turkey during 1993/1994 has confirmed the existence of problematic issues and has demonstrated a need to resolve these issues. Resolution of these issues will result in improved effectiveness of allied countries to procure arms from the U.S. Government in the future.

B. SPECIFIC ISSUES

As we look toward the future, Security Assistance will continue to be an important factor for promoting international and regional stability, while enhancing the security of allies. Under the umbrella of Security Assistance, the program component of FMS/FML is a vital tool for encouraging the continued cordial relations among allied and friendly nations. Within this program component, the FML, "Hot Ship" transfer method, creates the most beneficial conditions for both trading countries. However, although the "Hot Ship" transfer method is the most beneficial, there are still problematic issues requiring resolution. The four major issues impacting the ship transfer programs are:

- The closure of the U.S. Navy training facilities that are providing extensive training for the recipient navies;
- The downsizing of the U.S. defense industrial base that will provide follow-on technical/logistical support to customer countries for effective operation of weapon systems;
- Deficiencies in the existing ship transfer guidelines which cause uncertainty for implementation and frustration between trading nations;
- The limited knowledge and experience of the U.S. Implementing Agencies and recipient countries with respect to "Hot Ship" transfers.

With respect to these problematic areas, this thesis has proposed several recommendations for the improvement in the planning of future FMS/FML ship transfer programs. The key considerations for improvement are:

- All changes to the transfer timeline should be coordinated before implementation in order to minimize the influence of exogenous factors such as political interests.
- The U.S. Navy should provide contractor support for training affected by base closures, and allow recipient nations to purchase the training systems related to the transferred ships.
- Existing policies should be revamped to allow recipient navies the flexibility in obtaining technical information that is no longer usable for the U.S. Navy.
- Training policies should be standardized to reflect clear guidance for training of ship systems.
- FMS/FML accounting systems should be made more transparent to the recipient navy.
- To minimize future sustainability problems of recipient navies, the U.S. should provide spare parts ships, in the short term; and the opportunity for direct commercial sales from U.S. contractors, in the long term.
- A ship transfer timeline should be planned that is flexible enough to answer unanticipated contingencies affecting the implementation of the program.

C. ANSWERS TO RESEARCH QUESTIONS

This section provides answers to the research questions presented in the introduction of this thesis.

1. Primary Research Question:

The primary research question for this thesis is:

"What are the problematic issues involved with the FMS/FML of nine former U.S. Knox Class Frigates to Turkey, by

using the "Hot Ship" transfer method and how can these issues be resolved?"

The analysis conducted on the FMS/FML case, with regard to the Turkish Knox Class Frigate transfer, revealed many problematic issues. A listing of these issues is presented below:

- School quotas were not arranged until after the arrival of Turkish Naval crews.
- Although the required funds were committed by the Turkish Navy, eight different formal school courses were canceled, due to the closure of U.S. training facilities. Schooling conflicted with shipboard on-the-job training.
- Political interests on the program caused schedule accelerations and resulted in Turkish personnel to report to their ships before completion of formal school training.
- Unclear U.S. Naval policies limited the depth and breath of training received by the Turkish Navy crew on weapons system employment.
- Doctrinal differences between the two navies affected the conduct of shipboard engineering training.
- Limited number of interpreters and the English comprehension level of the Turkish crew adversely affect on-the-job training sessions.
- Current U.S. ship transfer policy and regulations limited the Turkish Navy's ability to obtain critical technical data and information pertaining to the sonar system.
- Downsizing of the U.S. military caused the equipment, needed to provide long-term support, to be

discarded before the recipient navies have an opportunity to identify their needs.

- Lack of in-depth discussions regarding the communications support during technical briefings caused communication deficiencies for some ships sailing back to Turkey.
- Unilateral changes to transfer timelines by TN Headquarters negatively affected the logistics support.
- Differences in the level of COSALs of the ships transferred caused Turkey to incur additional costs to bring the COSAL levels up to required quantities.
- Unclear lease agreement stipulations caused a lower quality of ammunition to be dispensed to the Turkish Navy.
- Inaccurate reporting of FMS funds in the U.S. accounting system caused the incompleteness of sonar system repair work.
- Shrinking of the U.S. defense industrial base has caused uncertainty in the future capability of the U.S. to support ship transfers.
- The on-the-job training period was too short and not extensive enough to allow flexibility in training.
- Lack of continuity in U.S. Navy personnel during the ship turnover process caused a disruption in the ship transfer program.

2. Subsidiary Research Questions:

a. *"What Is the Security Assistance Program and What Are the Procurement Possibilities Within this Program That Are Available to Foreign Countries?"*

Material presented in Chapter II of this thesis revealed the following information:

Security Assistance is an umbrella term for a group of programs in which the U.S. provides defense articles, military training and other defense related services by grant, credit or cash sales/lease to allied nations.

All procurement of military equipment from the U.S. Government to other nations falls within the realm of one of the seven Security Assistance programs:

- FMS/FML and Foreign Military Construction Sales Program.
- The Foreign Military Financing Program (FMFP or FMF).
- Direct Commercial Sales (DCS) Licensed Under The Arms Export Control Act (AECA).
- The International Military Education and Training Program (IMET).
- The Economic Support Fund (ESF).
- Peacekeeping Operations (PKO).
- The Nonproliferation And Disarmament Fund.

b. "What Are the Current FMS/FML Ship Transfer Methods and Procedures for the Turnover of Former U.S. Navy Vessels to Allied Countries under the provisions of the Security Assistance Programs?"

Material presented in Chapter III of this thesis revealed that there are *five basic methods of FMS/FML vessel transfers that have developed from the common processes experienced over the last several decades*. These methods are:

- "Hot Ship" Transfer Without an Industrial Availability.
- "Hot Ship" Transfer With Follow-On Industrial Availability.
- "Cold Ship" Transfer "As Is, Where Is."
- "Cold Ship" Transfer With Minimal Reactivation.
- "Cold Ship" Transfer With Full Reactivation.

A diagram depicting the current process is shown in Chapter III.

c. "What Are the Major Features Associated with the "Hot Ship" Transfer of U.S. Naval Vessels to Allied Countries?"

Material presented in Chapter III of this thesis revealed the following major features:

- A "Hot Ship" transfer is the most beneficial method for both the U.S. Navy and the foreign government.
 - U.S. Navy saves money that would be expended in moth-balling the ship.
 - The foreign government will receive a currently operational asset of the U.S. fleet that requires minimal transfer related repair/reactivation expenditure on their part.
 - The foreign government will expend funds for only performing homeward voyage repairs and logistics support.
- Availability of U.S. Navy crew provides valuable on-the-job training.

- "Hot Ship" transfers allow the foreign crews to conduct at-sea training with U.S. Navy assets.
- "Hot Ship" transfers are preferred, however, if time does not permit an orderly turnover to occur, they can tie up fleet assets needed to support U.S. Navy obligations and requirements.
- Preparation for transfer is constrained in time by the ship decommissioning date.

Figure 7 (Chapter III) depicts the detailed process for "Hot Ship" ship transfer method.

d. "What Are the Lessons Learned from the FMS/FML Ship Transfer Case of the Knox Class Frigates for Turkey?"

The analysis conducted in Chapter IV, with respect to the Turkish Knox class ship transfer case, revealed the following lessons learned:

- The FML benefited both Turkey and the U.S.
- "Hot Ship" is the most beneficial transfer method.
- The scheduling of schools must be improved.
- Exogenous factors can influence the implementation of the training program.
- Future training support is affected by the U.S. downsizing.
- Ambiguous policies are limiting the depth and breath of training.
- Doctrinal differences can affect the conduct of training.
- Communication barriers limit learning from training.

- Current U.S. FMS/FML ship transfer policies do not reflect the effects of downsizing.
- Technical briefings should include communication issues.
- Unilateral changes to timelines negatively effect logistics planning.
- Level of COSAL equipment varies from ship to ship.
- Class and quality of ammunition should be stated in the lease agreement.
- Tracking of funds is a major hurdle for the recipient country.
- Follow-on technical/logistics support is waning.
- The on-the-job training period is too short.
- During the ship transfer process maintaining continuity of U.S. Navy personnel is vital.

VI. RECOMMENDATIONS

A. RECOMMENDATIONS FOR EFFECTIVE IMPLEMENTATION OF FUTURE FMS/FML SHIP TRANSFER PROGRAMS

Based on the analysis of the Turkish Knox class ship transfer case presented in Chapter IV of this thesis, this chapter proposes the consideration of the following factors for the effective implementation of future FMS/FML ship transfer programs:

1. General Recommendations

a. *Continue FML Vice FMS*

Leasing can afford recipient nations the opportunity to acquire ships that otherwise may not be available to them. Additionally, leasing is more beneficial than procuring through FMS, due to the savings in cost.

b. *Continue "Hot Ship" Transfers*

The "Hot Ship" method of transfer allows the foreign crew to interact with their U.S. Navy counterparts, which in turn increases the operational capability of recipient navies. Additionally, this method of transfer minimizes the costs for trading countries.

c. *Improve Scheduling of Schools*

To avoid scheduling problems, formal foreign crew school training requirements should be scheduled prior to the arrival of the foreign crew. Further, schooling should be completed 3-4 weeks prior to commencement of at-sea training. This will guarantee sufficient vital shipboard training for the recipient navy maintenance technicians, who will actually perform maintenance repair on shipboard systems following the transfer.

d. Limit the Influence of Exogenous Factors On The Ship Transfer Program Implementation

In-depth meetings, early in the negotiation process, that strive to bring mutually agreeable resolution to minimizing the impact of exogenous factors, are critical. Information exchange and face-to-face dialog covering all parameters relevant to the ship transfer process are vital to a smooth ship turnover transaction.

e. Provide Contractor Support for Training That Is Affected by Base Closures and Allow Recipient Nations to Purchase Training Systems Related to the Transferred Ships

As a short-term solution to U.S. downsizing problems, it is proposed that COMNAVSEASYSKOM and NETSAFA agree to initiate immediate action to obtain civilian contractor support for the training courses that are affected by base closures. Also, CNO support is required to ensure training assets will be retained and U.S. Navy facilities are provided to support this initiative.

As a long-term solution, the sale/transfer of training systems (i.e., operator training simulator) that are identified as excess to U.S. Navy needs, should be offered to selected foreign navies. Early planning and coordination for system transfer and sales can prevent these training systems from being destroyed or removed. Additionally, to support this process, NETSAFA should develop a Training Systems Disposition Plan that addresses available training systems and country specific training needs.

f. Standardize Training Policies to Reflect Clear Guidance for Training of Ship Systems

It is recommended that the current policies be revamped and standardized to provide clear guidance, reflecting

the level of information to be provided to the recipient country during ship transfers and related training.

g. Cultural Differences Should be Taken into Consideration During Training Planning

In order to minimize doctrinal problems, it is crucial that the U.S. Navy non-engineering officers conduct cross cultural on-the-job training with their recipient navy counterparts.

h. Provide Sufficient Interpreters and Increase the English Comprehension Level of Recipient Navy Crews

In order to minimize communication barrier problems, it is recommended that the U.S. Navy provides a sufficient number of contracted interpreters to waterfront schools and the recipient navy improves the English comprehension level of personnel selected to participate in the ship transfer program, before their arrival to the United States.

i. Revamp Existing Policies to Allow Flexibility in Obtaining Technical Information for Recipient Navies

There is an urgent need to revamp the U.S. ship transfer policies and procedures to allow flexibility for recipient navies to obtain critical technical information related to the transferred ships that are no longer needed by the U.S. Navy.

j. Communications Support for Transferred Ships Following Sail Away Must be Addressed During Technical Briefings

In order to avoid potential future problems it is recommended that all communications support issues be addressed during the technical briefings.

k. All Changes to the Transfer Timeline Should Be Coordinated Before Implementation

Without coordination, unilateral schedule changes may adversely impact on the execution of logistics support. These adverse impacts could include increased transportation costs for the recipient navy.

l. Revise the Current Policies to Require Standardized Levels of COSAL Equipment for All Transferred Ships

Before transferring the ships, the U.S. Navy must ensure that the level of COSAL equipment transferred is standardized and meets the recipient navy requirements.

m. State Class and Quality of Ammunition Transferred in the Lease Agreement

To avoid potential frustration between trading nations, it is recommended that in-depth discussions during the pre-implementation transfer meetings, ensue concerning ammunition issues. Additionally, class and quality of ammunition transferred should be explicitly stated in the lease agreement.

n. Make the FMS/FML Accounting System More Transparent

It is recommended that an amendment to the current Ship Transfer policy guidance be created, that allows the customer country to receive financial status updates in the accounting system to monitor their financial progress.

o. To Minimize Future Sustainability Problems of Recipient Navies, the U.S. Navy Should Provide Spare Parts Ships and the Opportunity for Direct Commercial Sales

As a short-term solution to the spare parts requisitioning problem, one or two non-operational, same class ships can be transferred with the other active ships. These ships can be utilized as spare parts ship to support the other active

ships, at least until the customer country becomes self-sufficient in the production of required spare parts.

As a long-term solution, the recipient navy should be allowed to establish direct contact with the U.S. producer of parts. With the help of the U.S. producer, the recipient navy may create the required infrastructure in their country, and in a couple of years it may become self-sufficient in the production of these spare parts. Additionally, technical assistance needs of the recipient country can be satisfied with the employment of the U.S. contractor who has experience on the ship systems.

p. Lengthen the On-The-Job Training Period

To ensure a "safe-to-sail" and "combat-ready" ship-board environment for the foreign crew, a 12-week (vice 10 week) training process is recommended. This 12-week training process should include four weeks of initial port training, four weeks of underway ship training, and four weeks of maintenance training. The added two weeks in the training process would provide some flexibility to a demanding transfer schedule and allow an extra week of vital underway ship-to-ship training with U.S. Navy counterparts, after the turnover of the ships.

q. Maintain U.S. Navy Personnel Continuity During the Ship Transfer Process

It is recommended not to change U.S. Navy personnel involved with the ship transfer process. When faced with military orders that would result in a break in the personnel continuity associated with the transfer, it may be solved through the use of U.S. Navy reserve personnel or contractor support. Continuity of U.S. personnel is required to ensure

all participants in the transfer process are aware of major milestones, and their roles are well known in advance.

2. Recommendations for Improving the Ship Transfer Timeline

Ship transfers are complex transactions that require close coordination among many U.S. Navy organizations and the recipient country officials. In this process, a ship transfer timeline that has been designed carefully to answer all the unanticipated contingencies affecting the implementation is vital for the success of the program. This section makes recommendations for the improvement of the ship transfer timeline.

- Decommissioning and transfer preparation activities should commence at least two months prior to recipient navy crew arrival.
- Equipment and publication sanitization activities should be concluded prior to recipient navy crew arrival.
- The commanding officer, the supply officer, the operations officer and leading supply and administrative personnel of the recipient navy crew, should arrive at least two weeks prior to the rest of the crew. This situation allows for close liaison work with the U.S. Navy crew and base services in preparation for crew arrival.
- Berthing arrangements should be established before foreign crew's arrival.
- Engineering and other technical personnel should arrive early enough to begin familiarization of ship's material condition and commence training.

- Administrative processing for foreign crews should take no more than one week. As soon as administrative processing is concluded, shipboard on-the-job training should commence and should be concluded before Decommissioning and Transfer of the ship.
- Conduct ammunition off-load after foreign crew arrives. This allows off-load to serve on-the-job training for future on-load by foreign crew.
- Four weeks after the foreign crew's arrival, underway on-the-job training should commence and last for four weeks.
- Following underway on-the-job training, ship should enter a four weeks restricted availability to conduct any major repair work. At this point in the transfer process, foreign crews have a good understanding on the material condition of the ship and can properly prioritize the repair work.
- Twelve weeks after the foreign crew's arrival, the decommissioning and transfer ceremony should be executed.
- Approximately one week after the transfer ceremony, refresher training should commence. Two weeks of duration is sufficient for this activity.
- Immediately upon conclusion of refresher training, the ship should proceed to the prearranged weapons station for a two-day munitions on-load.

B. RECOMMENDATIONS FOR FURTHER RESEARCH

The following areas are recommendations for further research:

- Pricing of on-the-job training for ship transfers. Current U.S. Navy ship transfer policies are not explicitly defined for the pricing of on-the-job training provided to the foreign crews. Lack of definitive guidances for on-the-job training costs may

create a problematic issue between the U.S. and the recipient Navy. Thus, research on this issue proposing a new pricing procedure is vital.

- Impacts of FMS/FML ships in the establishment of the defense industrial base for the recipient countries. Currently most of the recipient countries have limited defense industrial bases to sustain the FMS/FML ships. An in-depth research for the impacts of these ships on recipient country defense industrial base is required for sustaining the effective operation of the ships by the recipient navies.

APPENDIX. DETAILED SHIP TRANSFER PROCESS

This appendix describes the basic transfer process necessary to successfully complete the turnover of a U.S. Navy ship to the customer navy.

A. THE PLANNING PHASE

1. Ship Availability

The process leading to U.S. Navy ships being made available for foreign transfer can often be forecast well in advance or sometimes be short fused as budget direction and other political influences cause immediate changes in Navy force structure.

a. Ships Expected Service Lives (ESL)

The Navy Programming Division (NPD) periodically provides a memo that states the policy for force level projections and reflects years of expected service for all ship classes for use by resource sponsors in long range planning. Ships will normally be retired upon reaching ESL. Extensions beyond ESL require resource sponsors to submit requests with justification and a statement that fiscal and manpower resources are available to support retention.

b. Ship and Aircraft Supplemental Data Tables (SASDT)

The value of this document is that it shows the fiscal year that a ship is scheduled to change. These changes are from: new construction to active, active to inactive, inactive to active, and from active/inactive to disposal.

The Office of Chief of Naval Operations (OPNAV) sponsor reviews this document coincident to the budget cycle.

As ship's near the end of their ESL, the sponsor initiates the retirement process. This includes: obtain recommendations from Fleet CINCs, obtain CNO retirement approval, obtain approval from Secretary of the Navy (SECNAV), decide on disposition plans for each ship and budget inactivation funding.

c. Ship Disposition Review (SDR)

In this process, OPNAV warfare sponsors confirm ship inactivation schedules, determines the ultimate disposition of retiring ships and confirms the status of those already in the Inactive Fleet (IF). This is an annual meeting, the purpose of which is to review the retention status of mobilization assets presently in the IF, ship presently head for FMS/FML, and all ships scheduled for decommissioning/deactivation for the next seven fiscal years. It will determine which of these ships should remain or be scheduled for retention as mobilization assets, which should be made available for FMS or FML, and which should be disposed. The SDR develops a document for CNO approval [Ref. 14:p. 3].

2. Foreign Transfer Options and Prerequisites

Prior to a vessel being offered for transfer certain decisions and administrative prerequisites must be met. The board of Inspection and Survey (INSURV) inspections and the CNO certifications are required, time consuming events needed to permit the transfer process to proceed.

a. INSURV Inspections

These are the periodic inspections of ships by the INSURV which are required by 10 U.S. Code, Article 7304. Further OPNAVINST 4770.5F requires that ships scheduled for

decommissioning be inspected by INSURV from 2-6 months before inactivation to document their material condition. The results of these inspections are critical to OPNAV decisions on the ultimate disposition of the vessels. Ships found "fit for further service" are normally retained for USN mobilization purposes or made available for foreign transfer under a lease agreement. Vessels found "unfit for further service" are normally struck from the Naval vessel register and made available for foreign sale or disposed of after useable systems and equipments are removed.

b. CNO Certifications

Another key event in the disposition process are the certifications required of the CNO. As delineated in 10 U.S. Code, Article 7307 "Notwithstanding any other provision of law, no battleship, aircraft carrier, cruiser, destroyer, or submarine of the USN may be sold, transferred, or otherwise disposed of, unless the CNO certifies that it is not essential to the defense of the U.S." In addition, Chapter 6 of the AECA states "the president may not lease defense articles unless he determines they are not for the time needed for public use." This certification is also required of the CNO as a basis for a subsequent determination by the Director, Defense Security Assistance Agency (DSAA).

c. SECNAV Authority to Strike/Sell/Lease

By SECNAVINST 5440.4 of 17 December 1984, the SECNAV has stated that "no active or inactive ship of the USN may be decommissioned, deactivated, stricken, transferred to the custody of a foreign government or any other USG agency, or

otherwise stricken or transferred without the direct authorization of the SECNAV."

B. THE SHIP OFFER PHASE

1. Foreign Government Requests

These requests can be in the form of formal written documents to any level in the USG or informal verbal exchanges that filter down to OPNAV/Navy IPO when a U.S. dignitary returns from a formal visit. The most formal document which may include a foreign country's requirement for a ship transfer is the Annual Integrated Assessment of Security Assistance (AIASA). This report is submitted annually by the U.S. Diplomatic Mission in the country requests for ships are channeled through the country SAO and back to the Navy directly. In addition there are occasions when countries are offered ships based on a decision within the USG that it would be in USG interest to assist in the development of their Navy. This can be initiated by screening messages to the Fleet CINC's requesting a justified and prioritized assessment of country requirements for ships in their theater of operations. Offers of this nature are normally proposed in a general way to the foreign Navy through SA channels before any specific offer is initiated.

2. Ship Transfer Offers Approval

The document used to obtain approval of which countries will be offered specific ships is drafted and coordinated by OPNAV. It is a memorandum to SECNAV with an accompanying memo for SECNAV to sign out to the SECDEF. An enclosure lists the countries with the ships proposed for transfer and another enclosure provides supporting rationale on the countries

selected. This memo will also contain the certifications required of the CNO to transfer a combatant or to lease any vessel. Prior to CNO signature, this proposal is cleared in OPNAV/Navy IPO and informally coordinated with the staffs of the Joint Chiefs of Staff (JCS) and DSAA. This is accomplished to minimize changes after signature by CNO. Since this a politically sensitive decision document, the formal coordination at SECDEF is extensive and includes many staff directions as well as special groups such as: Excess Defense Articles allocation Committee, Low Intensity Conflict Group, DOD Drug Coordinator and JCS. These are listed to show the political sensitivity of this program and indicates why it often takes months to gain the necessary approvals.

3. CNO to CNO Formal Ship Offer

Upon approval by SECDEF to extend offers, OPNAV in coordination with the Navy IPO will draft a letter to the foreign country CNO (or equivalent). The letter will be signed by CNO and forwarded through Security Assistance channels to ensure the U.S. Ambassador and Defense Attache are in concurrence. This offer to undertake the ship offer includes several points:

- Identifies the specific ships offered.
- States the transfer is subject to congressional approval.
- States Navy IPO will contact their government representative to provide background information, set up a ship inspection visit, host a conference to discuss transfer details and discuss costs.

4. Navy IPO Letter to Inspect Ships and Receive Transfer Briefing

After the CNO offers are forwarded to the foreign government, Navy IPO works with NAVSEASYSOM, INACTSHIPSOM, NAVSUPSYSOM, NETSAFA, and appropriate systems command organizations to develop a schedule that will allow inspections of ships and follow up formal technical briefings in an orderly fashion over the next 6-8 months. This is often difficult as most countries want to start immediately. However, preparations for visits/briefings require time and coordination, and must consider the schedules and limited assets of all participants. Prior to sending the invitation to the foreign government, Navy IPO informally discusses a proposed schedule with the SAO and/or the local foreign Embassy. The Letter of Invitation from Navy IPO generally contains the following:

- Identifies ships offered.
- Provides current location of ships.
- Proposes dates for foreign team to inspect ships.
- Proposes dates for formal briefings to outline legal/administrative requirements and costs associated with the transfer.
- Advises that this invitation does not constitute a formal agreement to transfer the ships.

C. SHIP INSPECTIONS AND FORMAL BRIEFINGS PHASE

After acceptance of the visit/briefing offer by the foreign government, Navy IPO sends a message to the various

activities that will be implementing or supporting the transfer program. It will outline the inspection/formal briefing schedule, provide a rough agenda, and solicit ideas/suggestions from the supporting activities. The message will request points of contact within each organization to facilitate visit/briefing arrangements and any schedule adjustments that may become necessary. Additional information, as it is known, is included to help with planning.

1. Ship Inspections

The inspections are normally held at fleet locations, Navy Inactive ship Maintenance Facilities, or Maritime Administration (MARAD) facilities. Each of these activities need to be prebriefed on the transfer process, necessary for a detailed inspection and any unique protocol appropriate to the rank or level of the foreign inspectors. On some occasions they have requested to visit other activities that might be used to support the transfer (training, logistics, repair facilities, etc.).

2. Formal Briefings at Navy IPO/NAVSEASYSKOM

Within a day or two following the ship inspections, formal transfer briefings will be held at Navy IPO/NAVSEASYSKOM. These briefings will outline in detail the transfer process, a general transfer plan, technical details on the key systems and equipment on the ships, available training and follow-on support. A desirable result of the discussions is to find out what the foreign country desires in terms of training, logistics, and pre/post transfer repairs or upgrades. Information gathered during these exchanges will be

important in the development of lease/sale agreements the transfer plan and LOA's used to provide services/support.

3. Formal Country Commitment

The final action in this preliminary step in the transfer process is the most important. Navy IPO will solicit a formal commitment from the foreign government that they are interested in pursuing the ship transfer. Normally, the country response is in the form of a LOR. Having seen the ships and been presented with the facts and costs associated with the sale or lease, each foreign government must decide if they have the assets necessary to succeed. Their in-country facilities, number and quantity of personnel, and available budget authority may fall short of the significant infrastructure required to support additionally ships.

From the USN perspective this official assurance is important before imitating the congressional notification/legislation necessary to authorized the transfer. It is USN policy to avoid the time consuming and politically sensitive step of proposing legislation before Congress if they are not sure the country wants to proceed.

D. CONGRESSIONAL AUTHORIZATION AND SALE/LEASE DEVELOPMENT PHASE

Upon completion of the above preliminary phases of the ship transfer process the actual implementation of the transfer is set in motion by the Navy IPO. This includes formally assigning an Implementation Agent, initiating the Congressional approval process, and developing the transfer many LOA's needed to support the transfer.

1. The Implementing Directive

Although the assignment of the Implementing Agent is generally clear prior to the formal ship transfer briefings, the official assignment normally comes after the foreign government confirms their commitment to continue the transfer. Navy IPO announces the assignment to the many Navy activities involved in the transfer by message, with a general outline of the transfer timetable. The announcement tasks and calls on supporting activities to provide points of contact during the formal transfer briefings/discussions establishes the basis for the plan submitted by the Implementing Agent.

2. Congressional Notification/Legislation

Title 10, U.S. Code, Article 7307 imposes the congressional requirements. They are also outlined in Chapter 2 of the Security Assistance Management Manual (SAMM).

a. Article 7307 (b) (1)

According to this article, a Naval vessel that is in excess of 3000 light tons or less than 20 years of age may not be transferred to another nation, unless approved by law and enacted by Congress. In order to imitate the actions for Congressional Legislation, Navy IPO submits a memorandum to the Office of Legislative Affairs of Navy (OLA) which encloses the proposed bill and ship data/characteristics. Simultaneously, a copy of this memorandum is provided to the DSAA/OPS for coordination. OLA proposes the bill for Congressional Enactment as it is stated in SECNAVINST 5730.56 and obtains required clearances from SECNAV and SECDEF, Office of Management and Budget before proposing it to Congress.

Congressional clearance starts with committee actions undertaken by: Senate Foreign Relations Committee, House Foreign Affairs Committee, Senate Armed Services Committee, House Armed Services Committee, and other committees with oversight interest. When all of these political hearings are completed, the proposed bill is voted on by the House and Senate. Finally, with the signature of the President, enacting legislation is completed.

b. Article 7307(b) (2)

Under this article, a Naval vessel that is less than 3000 light tons and greater than 20 years old may be transferred only after the SECNAV has notified Congress in writing of the proposal transfer and 30 days of continuous session of Congress have expired without legislation objecting to the proposed transfers. In order to initiate the action for Congressional Notification, Navy IPO submits a memorandum to OLA which requests a Congressional Notification and provides ship/data characteristics. As like in the legislation case, a copy of this memorandum is provided to the DSAA/OPS for coordination. Based on this memo OLA drafts a Notification Letter to Congressional Committees and simultaneously obtains required clearances within USN organizations. When 30 days continuous session of Congress concludes without legislation objecting to the proposed transfer, ship transfers are automatically authorized.

3. Lease Development

Upon completion of Congressional notification/legislation requirements, the proposed lease and a determination drafted by Navy IPO are forwarded to DSAA for final approval.

Subsequent to DSAA approval, the actual lease agreement is signed by the appropriate representatives of both countries. A lease designation is used to track the lease in existing automated systems. Schedule A of each lease identifies the replacement costs of the ships being leased and the schedule for rental payment due to the USG. Billing to the lessee will be based on this schedule of payments and will be included on a separate form with the country's quarterly FMS billing statement. These payments by the customer country must come from national funds and cannot be paid with FMS credits.

4. Sale LOA Development

An LOA is used for FMS cases to execute the sale. If the LOA is acceptable to the purchaser, they have sixty days to complete, sign, and forward it with any required initial payment. The LOA becomes a contract when it is accepted and signed by a representative of the purchasing nation. Once signed, the LOA is assigned a case number, and it is referred to as an FMS case by this case number. The sale price of ships is developed in accordance with procedures outlined in DODINST 7250.3M and SAMM Chapter 7. Normally, the sale price is the greater of the current market value, fair value or scrap value of the ship. In addition, the value of onboard repair parts, fuel and lube oil, and small arms ammunition is added where applicable.

D. TRANSFER IMPLEMENTATION AND SUBSEQUENT SUPPORT PHASE

Subsequent to establishment of transfer or method through bilateral agreement between the countries actual transfer of the ships are executed according to the general provisions defined below:

1. Delivery Preparations

The conditions under which the transfer is carried out are detailed in the Transfer Plan and LOA/Lease agreement. SECNAVINST 4900.48 provides guidance on the release and removal of the classified equipment communication secure equipment, tactical publications on-board of the ships. Generally, the ships records and correspondence are not removed prior to a hot ship transfer. Machinery and equipment history records, Planned Maintenance System (PMS), COSAL/COSMAL and the Current Ship's Maintenance Project (CSMP) are transferred to the recipient country.

Normally, USN will order consumables, repair parts, COSAL deficiencies, and material required by the recipient country. These items may be ordered by open purchase with the country to reimburse costs from a FMS case, or from the Navy Supply System by directly charging to the FMS case.

Gun ammunition (except for small arms ammunition and pyrotechnics), missiles, and torpedoes are not transferred with the ship. These items, if authorized for release and transfer to the foreign government, may be separately purchased by the foreign Navy under FMS cases [Ref. 13].

b. Foreign Crew Support

The Implementing Agency is responsible for arranging the support for the foreign crew members upon their arrival at the transfer site. This entails arranging for messing, berthing, transportation, and training coordination, providing office space and general support during the transfer. The foreign crew members taking the custody of the ship at transfer arrive at the ship through several channels. Some

may have been in the U.S. attending various USN and DOD formal school under the sponsorship of Naval Education and Training SA Field Activity (NETSAFA) or the International Military Education and Training (IMET) Program. Still others may be arriving directly from the country.

c. Training Support

Training is handled under a separate FMS case from the ship transfer. Prior to ship transfer, a ship transfer training plan is developed by NETSAFA. The plan addresses the concepts an manpower, Personnel and Training (MP&T) requirements involved in the transfer, and the maintenance and manning concepts for the ship's operation subsequent to the transfer. Training is authorized by Navy IPO and NETSAFA. The Implementing Agency (IA) is the training coordinator for the foreign crew. As such the IA will arrange for and establish liaison with appropriate training commands on behalf of the foreign crew. Training under the IMET Program, regardless of the method of transfer or the legal authority, is paid for by FMS credits.

Specific issues associated with training are discussed below.

(1) *Formal School Training.* Formal School Training is coordinated by NETSAFA and conducted as English Language training, Basic Skills Training and Specific Equipment Training at a designated USN training facility.

(2) *On-the-Job-Training (OJT).* On-the-Job-Training is training in a task or duty while engaged in its performance during daily operation and maintenance situations. It can be performed either as a formal, scheduled program or informally

through the initiative of the trainer/trainee. In the ship transfer process, OJT is done extensively in Fleet Introduction Training and particularly during underway training evaluations. It is critical to foreign Navy personnel participating in the transfer to ensure a "safe-to sail" and "combat-ready" shipboard environment. Under this concept, while each crew member will have received training in basic operations and maintenance of individual systems and equipment, additional on-board training in watch station qualification is conducted to ensure the crew is effectively trained in standard operating procedures, emergency and casualty drills. On-the-job-training is conducted with the provision of Fleet Training Group (FTG), Mobile Training Team (MTT) and contractor provided training support [Ref. 15].

d. Security

The IA is responsible for ensuring adequate ship security is provided until the transfer. Arrangement are made with the host facility (Naval base, shipyard, etc.) and the decommissioning crew in conjunction with the foreign crew to handle ship and pier security. Ships forces handle the ships internal security until the transfer [Ref. 17].

e. Decommissioning and Transfer Ceremony

The transfer ceremony is normally held concurrent with the USN decommissioning of the ship. The transfer ceremony is required in the case of a hot ship transfer, and may be conducted for other transfers, if it is requested by the foreign country, the IA represents the U.S. CNO at the transfer ceremony and the officer designated by the IA (usually the Squadron Commander or the Decommissioning Ship

Commanding Officer) is responsible for conducting the ceremony. That officer will be authorized to turn over the ship to the foreign government. The foreign country takes possession of the vessel at the conclusion of the USN decommissioning ceremony.

f. Transfer Documentation

A certificate of delivery is provided by Navy IPO for execution by the officer authorized to turn over the ship to the foreign Navy. The certification is signed in duplicate, by the IA and the representative of the foreign government during the transfer ceremony.

g. Status of Ship

The U.S.Navy maintains legal responsibility until the ship is decommissioned and both parties have signed either the Lease Agreement or Sale LOA and the Delivery Certificates. After a hot ship transfer, the ship proceeds under the flag and command of the foreign Navy commanding officer as a commissioned ship of the recipient Navy. If the ship is transferred from an inactive status, it becomes the legal responsibility of the recipient government after delivery.

h. Homebound Logistics and Communications Support

Logistics and communications support for the homebound voyage is authorized in SECNAVINST 4900.49. Such support will be provided under FMS and will be priced in accordance with the FMS Financial Management Manual (DOD 7290.3M). Spare parts and consumables needed can be requisitioned through the USN supply system by the foreign crew on a "fill or kill" basis on cost-reimbursable basis after transfer. This is not authorization for routine

replenishment of spares by the foreign country. Routine replenishment, whether for a short or long periods, based on the desires of the foreign country will be purchased under a separate FMS spares replenishment case.

i. Third Country Visit Clearance

In preparation for the transit home, the recipient navy may schedule port calls in Third World countries. In this case, it is the sole responsibility of the foreign government to obtain any diplomatic clearance which may be required by the Third World country government. The IA will assist the foreign Navy during this process by having the visit clearances checked by the U.S. Defense Attache Office in the countries to be visited, and verification of this clearance will be communicated to the CNO no later than two weeks prior to the ship's departure from U.S. waters.

j. Ship's Departure

After completion of the transfer ceremony and signing of the delivery certificates, the recipient may take the ships to its homeport at the time decided by the country.

k. Post Delivery Support

The responsible agent for continued support after the Hot/Cold ship transfer is completed is NAVSEASYS COM. After the foreign country has taken possession of a leased vessel, NAVSEASYS COM will be directed by Navy IPO to conduct periodic inspections of the vessel to ascertain its condition and continue as an mobilization asset for the U.S. Navy. Leased ships no longer fit for U.S. service, or those which are excess to USN requirements, may be struck from the Naval Vessel Register and sold. The in-country SAO is responsible

for monitoring the appropriate use of the vessel. The SAO shall also make recommendation through Navy IPO concerning local support in training, logistics, communications, administrative, and technical support required to maintain the ship. Post transfer support is provided only to the extent funded by the recipient country in a FMS support case. This may include NAVSEASYSKOM review of the foreign country maintenance and ship support facilities through a site survey. An initial survey is usually performed to support work planning for the ship prior to transfer. This is performed so that appropriate work will be accomplished at the foreign shipyards and allows the opportunity for the USN to offer follow-on technical support [Ref. 19].

D. FOLLOW-ON SUPPORT

Follow-on support consists of a wide range of available services. although normally focused on repair parts, it can also include industrial, technical, training, and documentation services. The U.S.Navy support can usually be provided, if it is separately requested and funded by the foreign country.

1. Maintenance/Industrial Repair

There are several actions the USN can take to assist the foreign country in defining or validating their maintenance concept. The primary action is to perform a maintenance history analysis to determine what type of maintenance is to be expected to be accomplished by the foreign country.

This analysis can include previous corrective maintenance actions, planned preventive maintenance, and planned class maintenance. This will allow for the projection of required

manpower and skill levels at both the ship level and industrial (shipyard) level. A second action involves a training survey at the host's country training capability that provides information on the skill levels of their existing sailors and shipyard workers. This will also assist the USN in making recommendations for additional training required in order to support the operation and maintenance of the ship. A third action, an industrial repair facility (shipyard) site survey, will provide an insight as to the host country's capability to perform the maintenance actions defined by the maintenance history analysis. Utilizing the actions defined above, the USN can provide assistance to the host country in determining additional crew training and industrial repair requirements, including equipment procurement, documentation, training and manning that will be required to properly perform maintenance on their newly acquired ships.

2. Supply Support

Supply support is the identification, procurement, and inventory control of shipboard allowance material and shore based initial supply support material required to support ship operations and maintenance. This includes the provision of support services for any shipboard and in-country supply infrastructure which will manage provided material. Coordinated Shipboard Allowance List (COSAL) establishes the range and depth of repair parts, special tools, and portable equipment required to operate and maintain installed equipment, and is designed to give the ship a self-supporting capability for 90 days. A primary goal of the transfer process is to ensure that the ship's COSAL and repair parts are updated to support

the actual on-board equipment when the transfer is completed. The Coordinated Shore Based Material Allowance List (COSMAL) reflects the repair part allowance, usually two years support, for a group of ships or an entire Navy. The COSMAL serves the same purpose for foreign Navies as does the DOD supply system for the USN ships. The COSMAL identifies the foreign customer's supply system stock to re-supply their ships as well as to support intermediate and depot level maintenance, and combines it into a single document. The establishment of a formalized system to update weapon system file (WSF) and its associated products (COSAL, COSMAL, etc.) is critical for providing long term accurate logistics and technical support to transferred ships. Using the newly computed fleet COSMAL allowance, a match to existing in-country assets should be made by the customer country to identify the residual deficiencies that need to be reviewed for procurement action. A system, such as Ships Parts Control Center (SPCC)'s automated Monthly COSAL maintenance action report program is indispensable in this area. The development of COSAL and COSMAL procurement of communicating spare parts as required is coordinated by NAVSEASYS COM and is funded by the foreign government.

3. Training Support

Training includes familiarization (indoctrination) training, individual and team training, initial (factory/contractor) training, replacement (personal) training, formal (classroom) training, OJT, and follow-on training. Most training is provided prior to ship transfer. However, because of the depth and breath of knowledge required after ship transfer,

follow-on training is recommended and scheduled as required by the foreign country. A comprehensive training plan for both shipboard and shipyard training is developed. The plan identifies equipments/systems and training required to qualify shipyard personnel to perform advanced level maintenance. Personnel from the USG activities capable of providing the required shipboard/shipyard training are utilized for specific training periods. After follow-on training has been completed, the foreign country should have the capability of training the number of personnel to fulfill their mission.

4. Technical Documentation Update

The documentation which is provided under the ship transfer program includes a wide variety of material. The majority of documentation used in primary support of the ship is directly related to the operation and maintenance of its systems and equipment. For ship transfers, publication costs are included in the price of the ship. If additional publications are ordered from the Aviation Supply Officer (ASO), the foreign customer will pay the actual cost of the publication. The actual cost is the cost the government paid to the Navy activity or vendor for the technical manual which includes development costs [Ref. 18:p. 7]. Naval Sea System Command is responsible to develop a process for providing Technical Manual Follow-on Support. Although a CD-ROM system may be available eventually for SA customers, a process for providing hard copy updates and changes to the Technical Manuals on-board the ship transferred is required. In order to develop a system for providing updates to Technical Manuals for several programs, NAVSEASYS COM identifies a set of factors

which are common to multiple programs and items which can be easily tracked and made compatible with the USN Technical Manual System. Also, economy is a very large factor in this analysis. The common factor in all programs is the list of documentation held. Many older U.S. ships do not have an accurate COSAL/Ship Configuration and Logistics Support Information System (SCLSIS) baseline from which to start, and even for those which do an automatic distribution based only on SCLSIS data presents additional difficulties concerning payment for documentation provided, shipping addresses, correct quantities being delivered, and releasability questions.

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